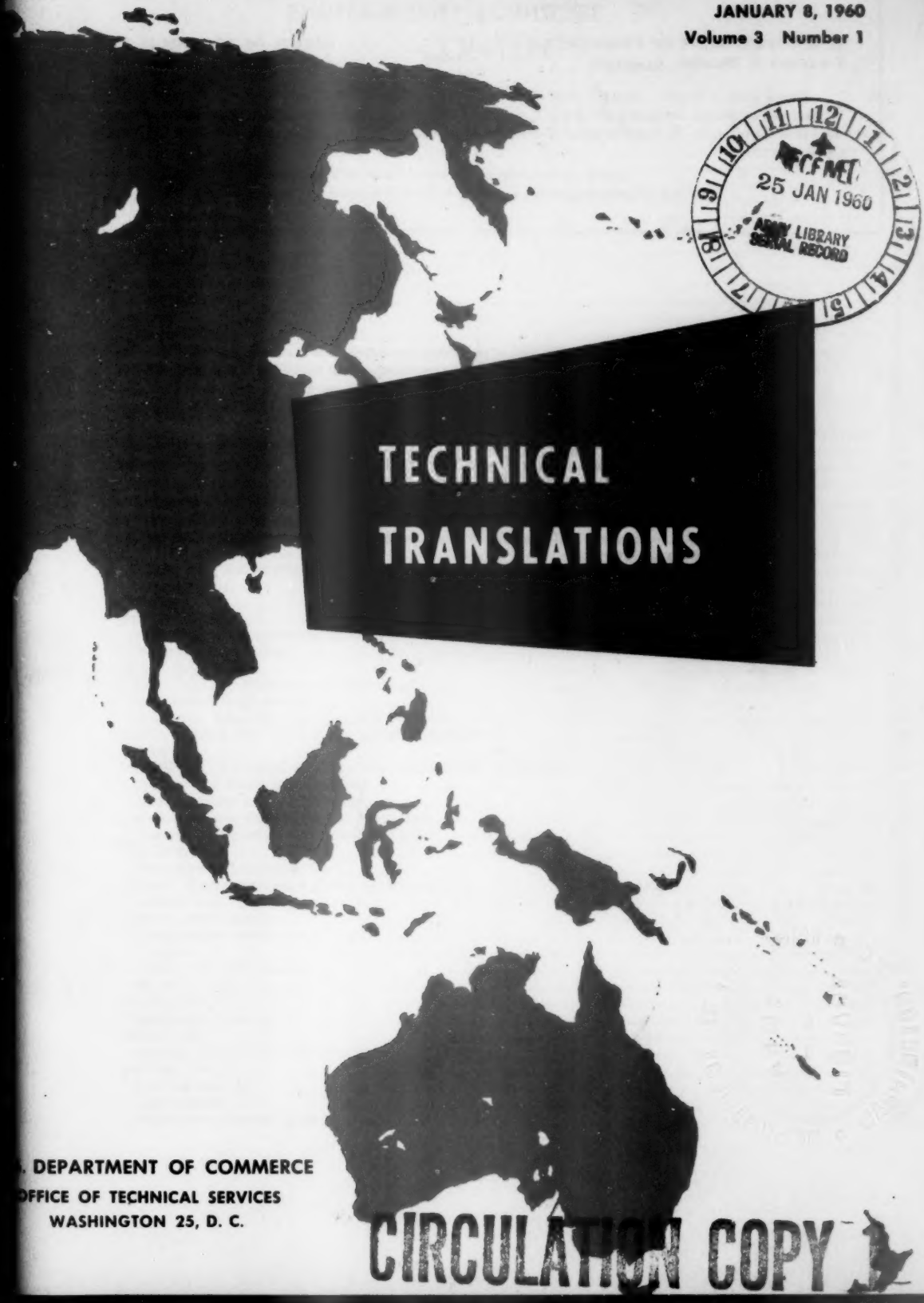
JANUARY 8, 1960
Volume 3 Number 1

C.F.M.E.
25 JAN 1960
ARMY LIBRARY SERIAL RECORD



TECHNICAL TRANSLATIONS

U. S. DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES
WASHINGTON 25, D. C.

CIRCULATION COPY

TECHNICAL TRANSLATIONS

U. S. DEPARTMENT OF COMMERCE
Frederick H. Mueller, Secretary

OFFICE OF TECHNICAL SERVICES
John C. Green, *Director*

Issued twice a month. Annual subscription $12 ($4 additional for foreign mailing). Single copy 60 cents. Make check or money order payable to OTS, U. S. Department of Commerce, and address your order to Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., or to a Department of Commerce Field Office.

Contents may be reprinted freely. Mention of source will be appreciated

Use of funds for printing this publication approved by the Director of the Bureau of the Budget, November 5, 1958

TECHNICAL TRANSLATIONS is published in cooperation with the Special Libraries Association Translation Center to list and abstract translated technical literature available from the Office of Technical Services, the Library of Congress, the Special Libraries Association, cooperating foreign governments, commercial translators and publishers, universities, and other sources.

The Special Libraries Association is responsible for collecting translations from non-Government sources, both domestic and foreign; the Office of Technical Services for collecting translations from both U.S. and foreign government sources.

The material available from the Office of Technical Services generally has been translated by other agencies of the Government and by private organizations and turned over to OTS for reproduction and distribution. Therefore, OTS assumes no responsibility for the accuracy of the translations.

CONTENTS

	Page
HOW TO ORDER TRANSLATIONS	iii
BIBLIOGRAPHY	1
AGRICULTURE	1
Animal Husbandry	1
Plant Cultivation	2
ASTRONOMY	2
Astrophysics	2
BEHAVIORAL SCIENCES	6
Psychology	6
BIOLOGICAL SCIENCES	7
Anatomy and Physiology	7
Biochemistry	8
Botany	9
General Biology	9
Microbiology	9
Neurology and Psychiatry	10
Pathology	10
Pharmacology and Toxicology	11
Radiobiology	13
Surgery	13
Zoology	14
CHEMISTRY	15
Analytical Chemistry	15
Inorganic Chemistry	16
Organic Chemistry	16
Physical Chemistry	20
EARTH SCIENCES	23
Climatology and Meteorology	23
Geodesy	24
Geology	24
ENGINEERING	25
Aeronautical Engineering	25
Chemical Engineering	27
Civil Engineering	28
Electrical and Electronic Engineering	29
Mechanical Engineering	31
Ordnance, Missiles, and Satellite Vehicles	31
FOOD, HANDLING, AND PACKAGING EQUIPMENT	32
Food	32
MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT	33
Engines and Propulsion Systems	34
Machine Parts and Mechanisms	35
Manufacturing Equipment and Processes	36
Transport, Traction and Hoist Facilities	41
MATERIALS	41
Ceramics and Refractories	42
Fuels, Lubricants, and Hydraulic Fluids	42
Leather and Textiles	43
Paints and Finishes	44
Photographic Materials	44
Plastics	45
Rubber and Elastomers	45
Wood and Paper	46
MATHEMATICS	46
Computing Devices	47
MECHANICS	47
Statics, Kinematics, and Kinetics	48
METALLURGY	48
Ferrous Metals	50
Light Metals	52
Nonferrous (except light) Metals	52

Page

METALLURGY (Con)
Structural Metallurgy and Corrosion 53
NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY 53
Elementary Particles 54
PERSONNEL SUPPLIES AND PERSONAL EQUIPMENT 54
PHYSICS 54
Electricity and Magnetism 55
Molecular Physics and Spectroscopy 55
Solid State Physics 55
Thermodynamics 57
Wave Propagation 58
RESEARCH METHODS, TECHNIQUES AND EQUIPMENT 60
SOCIAL SCIENCES 61
BOOK REVIEWS A-1
TRANSLATIONS IN PROCESS B-1
PERIODICALS TRANSLATED COVER-TO-COVER C-1
AUTHOR INDEX I-1
SUBJECT INDEX I-6
JOURNAL INDEX I-18
NUMBER INDEX I-26

HOW TO ORDER TRANSLATIONS

The translations reported in this issue are arranged under the categories indicated on the previous pages.

The sub-groups are flexible and used only when there are several translations in a particular sub-group. When the subject of a sub-group is not included in the Contents, reference should be made to the general category into which it falls.

References to sources of original text are given as they appear on the translation, with sufficient editing to assure uniformity in citations.

Listed below are agencies from which translations may be purchased. Each entry in the Technical Translations indicates by symbol the agency from which the translation should be ordered, the cost of the translation (if known), and the number by which the translation may be ordered, if such a number exists. Make check or money order payable to the agency indicated.

Translations ordered from LC or SLA are available either in microfilm (mi) or photocopy (ph). Microfilm is in 35 millimeter film and requires special reading equipment. If you do not have such a machine, you may be able to use one at a library in your area. Translations ordered from other sources, unless specific information is given to the contrary in the journal entry, are in printed form.

Some of the translation notes for individual translations have been marked with an asterisk preceding the name of the journal. The asterisk indicates that the particular journal is also translated cover-to-cover (see pg. C-1).

SYMBOLS FOR SOURCES OF TRANSLATIONS

AIP
American Institute of Physics
335 East 45th Street
New York 17, New York

ATS
Associated Technical Services, Inc.
P.O. Box 271
East Orange, New Jersey

BISI
The Iron and Steel Institute
4, Grosvenor Gardens
London, S. W. 1, England

CB
Consultants Bureau, Inc.
227 West 17th Street
New York 11, New York

CCT
Consultants Custom Translations, Inc.
227 West 17th Street
New York 11, New York

CHP
Cleaver-Hume Press Ltd.
31 Wright's Lane
London, W. 8, England

CIDNT
Centralny Instytut Dokumentacji Naukowo-Technicznej
Warszawa 12
Aleja Niepodleglosci 188
Poland

CSIRO
Commonwealth Scientific and Industrial Research Organization
Information Service
314 Albert Street
East Melbourne C. 2
Victorja, Australia

CTT
Columbia Technical Translations
5 Vermont Avenue
White Plains, New York

HB
Henry Brutcher
P.O. Box 157
Altadena, California

HMSO
Her Majesty's Stationery Office
P.O.B. 569
London, S.E. 1, England

HTCBN
Hungarian Trading Company for Books and Newspapers "Kultura"
Budapest 62, P.O. Box 149

IP
Interscience Publishers, Inc.
250 Fifth Avenue
New York 1, New York

LC
Photoduplication Service
Publication Board Project
Library of Congress
Washington 25, D.C.

LSA
Literature Service Associates
Route 1
Bound Brook, New Jersey

MACL
Maclaren and Sons, Ltd.
Maclaren House
131 Great Suffolk Street
London, S. E. 1, England

MDF
Morris D. Friedman, Inc.
P. O. Box 35
New Newton 65, Mass.

NASA
National Aeronautics and Spac Administration
1520 H Street, N. W.
Washington 25, D.C.

NRCC
National Research Council, Library
Ottawa 2, Canada

OTS
Office of Technical Services
Department of Commerce
Washington 25, D.C.

PP
Pergamon Press
122 East 55th Street
New York 22, New York

PS
Primary Sources
11 Bleecker Street
New York 12, New York

RIS
Research Information Service
40 East 23rd Street
New York 10, New York

SLA
SLA Translation Center
The John Crerar Library
86 East Randolph Street
Chicago 1, Illinois

TF
Taylor and Francis Ltd.
Red Lion Court, Fleet Street
London, E.C. 4, England

DEPOSITORY LIBRARIES FOR TRANSLATIONS

All documents listed in Technical Translations as available from OTS may be examined at the following libraries:

Special Libraries Association
Translation Center
The John Crerar Library
86 East Randolph Street
Chicago 1, Illinois

Carnegie Library of Pittsburgh
4400 Forbes Street
Pittsburgy 13, Pennsylvania

Georgia Institute of Technology
Price Gilbert Library
Atlanta, Georgia

Massachussets Institute of Technology Libraries
Building 14
Cambridge 39, Massachussets

The Pennsylvania State University
University Park, Pennsylvania

University of California
Engineering Library
Los Angeles, California

Library of Congress
Washington 25, D.C.

UNITED STATES DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES
WASHINGTON 25, D. C.

TECHNICAL TRANSLATIONS

Volume 3 Number 1 Pages 1-62 January 8, 1960

BIBLIOGRAPHY

TABLES OF CONTENTS OF EAST EUROPEAN TECHNICAL JOURNALS, tr. by Morris D. Friedman. 18 May 59 [36]p. T-25.
Order from LC or SLA mi$3.00, ph$6.30 59-16562

Trans. of table of contents of 18 journals.

Library of Congress, Washington, D. C.
EAST EUROPEAN ACCESSIONS INDEX. Nov 59, 275p.
Order from GPO $10.00/year

Designed to serve the English-speaking user, this index lists post World War II publications received by the Library of Congress and over 100 major American research libraries from Albania, Bulgaria, Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Poland, Rumania, and Yugoslavia in all fields of knowledge. Arrangement in the first part is by country and within each country by 17 subject classes. In addition to the entry in the original language, a translation of the title or a descriptive annotation in English is given for each monograph and periodical, with the tables of contents translated into English for selected periodicals. The second part, comprising approximately two-thirds of the Index, consists of a subject index to all articles appearing in periodicals for which the tables of contents are translated and to all monographs listed.

AGRICULTURE

Borkov, G.
MORE MINERAL FERTILIZERS, HERBICIDES AND INSECTICIDES FOR AGRICULTURE. 27 Aug 59, 10p. JPRS: L-1845-D.
Order from OTS $0.50 59-11774

Trans. of Ekonomika Sel'skogo Khozyaystva (USSR) 1958 [v. 29] no. 5, p. 42-48.

Ukolov, A. A.
TO RESUME THE TRAINING OF BREEDERS AND SEED GROWERS (Vozobnovit' Podgotovku Selektsionerov i Semenovodov). [1959] 5p. Trans. A-1035.
Order from LC or SLA mi$1.80, ph$1.80 59-16827

Trans. of Selek[tsiya] i Semen[ovodstvo] (USSR) 1959, v. 24, no. 1, p. 51-52.

Animal Husbandry

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958 (Soviet Abstracts. Biology)
Order from OTS $1.00

Contents:
Section Q. Farm Animals.

No. 16, Abstracts 73962-74174, JPRS: 1937-N, 59-13931
No. 21, Abstracts 96800-96955, JPRS: 1960-N, 59-13962.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 21 (Soviet Abstracts. Biology). 22 Oct 59, 30p. JPRS: 1966-N.
Order from OTS $1.00 59-13964

Contents:
Section R. Diseases of Farm Animals. Abstracts 96958-97038.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Blaszczak, J.
A NEW SYNTHETIC ANTIBIOTIC, tr. by P. M. M. 17 Nov 58, 1p.
Order from SLA mi$1.80, ph$1.80 59-20970

Trans. of Schweizer Archiv für Tierheilkunde, 1952, v. 94 [no. 3] p. 197-198.

An "invention" obtained by a synthesis of unnamed organic elements is said to possess all the properties of therapeutic action common to antibiotics. It also has an immunological effect and increases production of eggs, etc. This product, administered orally, has during two years of experimentation been shown to be 100% effective against Newcastle disease, fowl pox, avian coryza, typhus and ascarid infestation.

Graf, H.
PHARMACOLOGY OF THE FORESTOMACH SYSTEM, tr. by P. M. M. 12 Nov 52, 12p. (2 figs. omitted).
Order from SLA mi$2.40, ph$3.30 59-20959

Partial trans. in manuscript (p. 35-42) of Schweiz[er] Arch[iv für] Tierheilk[unde] 1951, v. 93 [Apr, spec. no.] p. 35-71.

The physiology and biochemical action of the rumen is discussed, with reference to the oral administration of drugs to cattle.

Teichmann, O.
CONTRIBUTIONS TO THE DIAGNOSIS OF HOG CHOLERA, tr. by P. M. M. 19 Oct 56, 2p.
Order from SLA mi$1.80, ph$1.80 59-20973

Partial trans. (p. 398) of Monatshefte für Veterinärmed[izin] (East Germany) 1955, v. 10, no. 17, p. 395-398.

Plant Cultivation

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 12 (Soviet Abstracts. Biology). 30 Sep 59, 39p. JPRS: 1936-N.
Order from OTS $1.00 59-13929

Contents:
Section J. Soil Science. Abstracts 53334-53437.

Complete translations of those entries which were originally published in the Sino-Soviet bolc and in Yugoslavia.

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 13 (Soviet Abstracts. Biology). 2 Oct 59, 19p. JPRS: 1928-N.
Order from OTS $1.00 59-13916

Contents:
Section O. Plant Diseases. Abstracts 58836-58915.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Khadzhinov, M. I.
BREEDING OF SELF-POLLINATED LINES OF CORN WITH STERILE POLLEN AND LINE-RESTORERS OF FERTILITY (Selektsiya Samoopylennykh Linii Kukuruzy so Steril'noy Pyl'tsoy i Liniy Vosstanoviteley Fertil'nosti). [1959] 10p. Trans. A-996.
Order from LC or SLA mi$1.80, ph$1.80 59-16796

Trans. of Selek[tsiya] i Semen[ovodstvo] (USSR) 1957, v. 22, no. 1, p. 8-13.

Kuz'min, A. Ya.
NEW TYPES OF BLACK CURRANTS (Novyye Formy Smorodiny). Dec 57 [4]p. C. T. S. no. 426.
Order from LC or SLA mi$1.80, ph$1.80 59-18515

Trans. of Priroda (USSR) 1956 [v. 45] no. 10, p. 94-95.

ASTRONOMY

Idlis, G. M.
COSMIC MATTER. [1959] [122]p. 25 refs. F-TS-9661/V.
Order from LC or SLA mi$6.30, ph$19.80 59-19536

Trans. of mono. Kosmicheskaya Materiya, Moscow, 1957.

A popular handbook on astronomy and the state of present-day knowledge of the universe.

Perel', Yu. G.
POPULAR SCIENCE LITERATURE ON ASTRONOMY (Nauchno-populyarnaya Literatura po Astronomii). [1959] [12]p. 22 refs. F-TS-9744[III.
Order from LC or SLA mi$2.40, ph$3.30 59-19522

Trans. of Priroda (USSR) 1957 [v. 46] no. 5, p. 117-119.

A review, based on Soviet sources.

Astrophysics

[ASTRONOMICAL JOURNAL]: SELECTED ARTICLES. [1959] [89]p. 65 refs. T-TS-9602/V.
Order from LC or SLA mi$4.80, ph$13.80 59-19473

Trans. of Astronomicheskiy Zhurnal (USSR) 1955, v. 32, no. 2, p. 139-149, 150-164, 165-176, 177-191.

Contents:
A hydrogen-helium model of the sun, by D. A. Frank-Kamenetskiy

Results of observations on the propagation of radio waves through the solar corona, by V. V. Vitkevich
Contribution to the question of the corpuscular radiation of the sun, by S. K. Vsekhsvyatskiy, G. M. Nikol'skiy, Ye. A. Ponomarev, and V. I. Cherednichenko
On the corpuscular emission from the sun, by E. R. Mustel'

*ASTRONOMICHESKIY ZHURNAL (USSR) 1958, 1959 (Astronomical Journal). [1959]
Order from OTS $0.70, $4.00/year
Foreign $0.95, $5.50/year

Vol. 35, no. 6, p. 825-960, PB 141 028T-5
Vol. 36, no. 1, p. 3-200, PB 141 028T-6

Consists of abstracts in English.

Al'pert, Ya. L.
IONOSPHERE INVESTIGATIONS BY ARTIFICIAL EARTH SATELLITES (Ionosfera i Iskusstvennyye Sputniki Zemli). [1959] [22]p. 5 refs. F-TS-9854/V.
Order from LC or SLA mi$2.70, ph$4.80 59-19487

Trans. of Priroda (USSR) 1958 [v. 47] no. 10, p. 71-77.

Beloyusov, S. L.
THE APPLICABILITY OF KIRCHHOFF'S LAW TO THE PHOTOSPHERE OF THE SUN AND OF STARS OF CLASS AO (O Primenimosti Zakona Kirkhgofa k Fotosfere Solntsa i Zvezd Klassa AO). [1959] [8]p. 13 refs. F-TS-9620/V.
Order from LC orSLA mi$1.80, ph$1.80 59-19465

Trans. of Akademiya Nauk SSSR. Doklady, 1951, v. 79, no. 5, p. 763-766.

The inelastic collisions in the photospheres of the sun and AO stars do not cause a substantial violation of Kirchhoff's law, although for the sun, the deviation from $j_\nu = k_\nu B_\nu$ for the visible region of the spectrum may reach 20%.

Berdichevskaya, V. S.
THE STRUCTURE OF THE SOLAR PHOTOSPHERE ACCORDING TO OBSERVATIONAL DATA (Stroyeniye Fotosfery Solntsa po Dannym Nablyudeniy). [1959] [12]p. 13 refs. F-TS-9599/V.
Order from LC or SLA mi$2.40, ph$3.30 59-19529

Trans. of Astronomicheskiy Zhurnal (USSR) 1953, v. 30, no. 3, p. 279-285.

The model proposed for the structure of the upper layers of the solar photosphere is based on observations of the center-limb darkening of the solar disk, yielding the dependence of the temperature T on the optical thickness τ_λ related to a definite wavelength.

Fialko, Ye. I.
THE DISTRIBUTION OF METEOR RADIO ECHOES ACCORDING TO THEIR DURATION. [1959] 11p. 3 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20693

Trans. of *Astronomicheskiy Zhurnal (USSR) 1957, v. 34, no. 2, p. 241-246.

The number, N, of sporadic meteors which give persistent reflections ($a > 2.4 \times 10^{12}$) and have durations greater than a known value of τ, is shown to decrease in inverse proportion to the duration, i.e., $N \sim (1/\tau)$.

Fialko, Ye. I.
THE DISTRIBUTION OF METEORIC BODIES ACCORDING TO THEIR MASS. [1959] 10p. 9 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20691

Trans. of *Astronomicheskiy Zhurnal (USSR) 1957, v. 34, no. 3, p. 419-423.

A simple method is considered for a more precise determination of the law of distribution of meteoric bodies according to their mass, based on radio-echo observations of meteorites.

Frank-Kamenetskiy, D. A.
HYDROGEN ABSORPTION AND THE MASS-LUMINOSITY RELATION (Vodorodnoye Poglosheheniye i Sootnosheniye Massasvetimost'). [1959] [14]p. 15 refs. F-TS-9601/V.
Order from LC or SLA mi$2.40, ph$3.30 59-19463

Trans. of Astronomicheskiy Zhurnal (USSR) 1954, v. 31, no. 4, p. 327-334.

A general theoretical formula for the mass-luminosity relation, considering absorption and scattering, in a relation between the parameters L/M^3 and $M^{2.5}/\sqrt{\tau}$, has been derived. It is shown that for stars with high hydrogen content, the central temperature appears to be so low that the hydrogen absorption cannot be neglected. A specific case of a star consisting of pure hydrogen is considered. For this limiting case, the absolute values of the luminosity is calculated as a function of the mass. The hydrogen curve so plotted on the mass-luminosity diagram passes near the points corresponding to actual stars of the central part of the main sequence (classes A-K). The points lying above the hydrogen curve must correspond to stars with higher helium content, and below that curve to stars with higher content of the heavy elements. With the accuracy to which the values of the structural factors are known today, there are no grounds for considering that the heavy atoms exert any substantial influence on the opacity of the stellar matter

Gnevyshev, M. N. and Gnevysheva, R. S.
CONTRIBUTION TO THE QUESTION OF THE NATURE OF THE SOLAR CORONA AND PROMINENCES (K Voprosu o Prirode Solnechnoy Korony i Proturberantsev). [1959] [8]p. (1 fig. omitted) 8 refs. F-TS-9628/V.
Order from LC or SLA mi$1.80, ph$1.80 59-19468

Trans. of Akademiya Nauk SSSR. Doklady, 1954, v. 94, no. 4, p. 639-641.

Gnevyshev, M. N. and Gnevysheva, R. S.
THE LUMINOSITY OF THE CORONAL LINE 5302.8 Å IN THE SOLAR CHROMOSPHERE (Svecheniye Koronal'noy Linii 5302.8 A v Solnechnoy Khromosfere). [1959] [5]p. 2 refs. F-TS-9630/V.
Order from LC or SLA mi$1.80, ph$1.80 59-19470

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 101, no. 4, p. 627.

Gordon, I. M. and Mustel', E. R.
PHYSICAL NATURE OF THE VARIABILITY OF STARS AND ORIGIN OF COSMIC RAYS [AND] CONCERNING THE MECHANISMS OF THE LUMINESCENCE OF HELIUM FLOCCULES. [1959] [21]p. 29 refs. F-TS-9772/V.
Order from LC or SLA mi$2.70, ph$4.80 59-19542

Trans. of Akademiya Nauk SSSR. Doklady, 1954, v. 97, no. 4, p. 621-628.

Kol'pakov, P. E.
CONCERNING THE NATURE OF CORONAL REGIONS (O Prirode Koronal'nykh Oblastey). [1959] [24]p. 19 refs. F-TS-9762/V.
Order from LC or SLA mi$2.70, ph$4.80 59-19763

Trans. of Astronomicheskiy Zhurnal (USSR) 1952, v. 29, no. 6, p. 638-648.

Data and simple calculations are presented which indicate that the increased luminescence, ionization and temperature of the coronal regions occurs because of the energy of electromagnetic fields of sunspots, infiltrating the coronal space. The "green" coronal regions, and particularly the C-regions, could be identified with the regions for which the fields $\vec{E}$ and $\vec{H}$ are arranged either in parallel or at a slight angle to each other.

Krat, T. V.
THE IONIZATION AND ELECTRON PRESSURE IN SOLAR FACULAE (Ionizatsiya i Elektronnoye Davleniye v Solnechnykh). [1959] [27]p. 13 refs. F-TS-9591/V.
Order from LC or SLA mi$2.70, ph$4.80 59-19527

Trans. of Astronomicheskiy Zhurnal (USSR) 1947, v. 24, no. 6, p. 329-343.

Mustel', E. R.
THE EJECTION OF HYDROGEN ATOMS FROM THE SUN (O Vybrasyvanii Vodorodnykh Atomov iz Solntsa). [1959] [9]p. 9 refs. F-TS-9624/V.
Order from LC or SLA mi$1.80, ph$1.80 59-19467

Trans. of Akademiya Nauk SSSR. Doklady, 1951, v. 81, no. 3, p. 363-366.

Nikitin, A. A.
CONTRIBUTION TO THE QUESTION OF THE APPEARANCE OF HELIUM ABSORPTION LINES IN THE SOLAR SPECTRUM (K Voprosu o Poyavlenii Liniy Pogloshcheniya Heliya v Spektre Solntsa). [1959] [16]p. 11 refs. F-TS-9598/V.
Order from LC or SLA mi$2.40, ph$3.30 59-19530

Trans. of Astronomicheskiy Zhurnal (USSR) 1952, v. 29, no. 4, p. 463-471.

The presence and intensity of the absorption lines of neutral helium with λ 10830 A and observed in the spectrum of the solar disk is explained by assuming that it arises on account of the accumulation of atomic helium in the metastable state 2^3S, as a result of recombination on all triplet levels (taking account of the collisions of the second kind bringing the atom from the state 2^3S to the state 1^1S, and of the ultraviolet ionizing radiation at about 2000 A). Other processes show less of an influence than these principal processes. The absence (or weakness), in the spectrum of the solar disk, of the absorption lines of helium with 2^1S as their lowest level, is likewise explained on the basis of the same model, allowing for the transitions of helium atoms from the state 2^1S to the state 1^1S with simultaneous emission of two quanta. The estimates of the equivalent widths obtained for the lines λ 5015 A and λ3965 A show that the detection of these lines (in view of the many blends in these regions of the spectrum) lies at the limit of instrumental possibilities. With increasing electron temperature, the population of the levels 2^1S and 2^3S varies differently. In the former case it decreases (number of collisions of the second kind $\sim T_e^{1/2}$), while in the latter case it increases (number of collision of the second kind $\sim \frac{1}{T_e}$). Calculations based on the data of Mel'nikov and Perepelkin of the equivalent width of the line λ10830 A are one order of magnitude greater than the preceding estimate based on other observational data. This apparently confirms the previous hypothesis that the intensity of the helium lines in the spectrum of the chromosphere varies with time. The existence of a maximum intensity of the helium lines at a certain height above the base of the chromosphere is established not only from the triplet data, but also from the single lines in the flash spectra of a number of eclipses, which speaks for the reality of this phenomenon, whose cause remains unknown.

Panovkin, B. N., Makarova, Ye. A. and others.
A MODEL OF THE INNER CORONA BASED ON RADIO DATA: STUDY OF THE ENERGY DISTRIBUTION IN THE CONTINUOUS SPECTRUM OF THE SUN IN ABSOLUTE UNITS BY THE PHOTOGRAPHIC METHOD; BRIEF NOTES: OBSERVATIONS ON THE INFRARED CORONAL LINES 10747 Å AND 10798 Å. [1959] [57]p. 81 refs. F-TS-9611/V.
Order from LC or SLA mi$3.60, ph$9.30 59-19539

Trans. of Astronomicheskiy Zhurnal (USSR) 1957, v. 34, no. 4, p. 505-515, 539-556, and 671-674.

The paper by Panovkin points out that observational data indicate a temperature gradient in the upper layers of the solar atmosphere, and that the inhomogeneity of the corona is great. The proposed model of the inner layers of the corona, which explains the effect of the brightness distribution in the decimeter band, is in good agreement with the Gertsenshteyn model of the outer layers (Zhur. Eksp. i Teoret. Fiz. 18: 303, 1956), and with astrophysical data. Makarova's paper reports that the energy distribution in the continuous spectrum of the center of the solar disk in absolute units was photographically derived by comparison with a spectrum of a reference lamp, in the region $\lambda\lambda$ 3700 to 8000. The derived distribution of the energy shows an anomaly in the region $\lambda\lambda$ 4400 to 5600, in agreement with J. Wilsing (Publ. Astrophys. Observatory Potsdam 22: no. 66, 1913; and 23: no. 72, 1917), and an increase in intensity in the region $\lambda\lambda$ 6800 to 7400. The absolute values of energy, determined photographically, lie between those found by C. G. Abbot et al. in 1902-10 and 1920-22, are in good agreement with those of Silsing, and coincide with those of G. F. Sitnik (dissertation, Moscow State Univ., 1955) within the limits of observational error. The notes by Gnevyshev, Gnevyshev, and Kurt announce that a method has been developed for observing the IR coronal lines 10747 and 10798 A by means of an electron-optical transducer and that systematic observations of these lines are being made. The helium line 10830 A and the Paschen series of hydrogen lines 10938 A are also obtained on the photographs.

Pyaskovskaya-Fesenkova, Ye. V.
THE AUREOLE AROUND THE SUN IN VARIOUS RAYS OF THE SPECTRUM (Okolosolnechnyy Oreol v Raznykh Luchakh Spektra). [1959] [9]p. 5 refs. F-TS-9621/V.
Order from LC or SLA mi$1.80, ph$1.80 59-19466

Trans. of Akademiya Nauk SSSR. Doklady, 1951, v. 79, no. 6, p. 957-960.

Salomonovich, A. Ye.
RADIO EMISSION OF THE MOON IN THE 8 MILLIMETER BAND. [1959] 16p. 10 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20692

Trans. of *Astronomicheskiy Zhurnal (USSR) 1958, v. 35, no. 1, p. 129-136.

The method and results of observations of thermal radio emission of the moon in the 8 millimeter band are given. The observations were made with a two meter radio telescope in 1955 - 1956. A dependence of the mean temperature of radiation of the moon on the phase of the moon was found. It can be approximated by the expression $T_c = 197^o - 32^o \cos(\theta - 40^o)$, where θ is the phase of the moon, counting from new moon. The derived results are compared with data of already published observations. (Author)

Severnyy, A. B.
SOME RESULTS OF STUDIES ON NONSTATIONARY PROCESSES ON THE SUN (Nekotorye Rezul'taty Issledovaniy Nestatsiyonarnykh Protsessov na Solntse). [1959] [22]p. 38 refs. F-TS-9612/V.
Order from LC or SLA mi$2.70, ph$4.80 59-19537

Trans. of Astronomicheskiy Zhurnal (USSR) 1957, v. 34, no. 5, p. 684-693.

Results of spectroscopic investigations with high resolving power and dispersion of nonstationary processes (flares, moustaches, continuous emission), carried out during the past four years at the Crimean Astrophysical Observatory are discussed. Continuous nonstationary emission originates in optically thin grains (size 0.5" to 3", lifetime up to 30^m) at the different levels of solar atmosphere ($0 < \tau < 0.6$). This fact as well as the intensity-distribution in the spectrum and the polarization of this emission indicate that the emission is of nonthermal origin. This emission cannot be caused by recombination processes or by scattering on possible electronic condensations. It may be produced by relativistic electrons with the differential energy spectrum $dN(E) \sim d\,E/E$. Nonstationary line-emission (moustaches) originates in very small (~ 0.5") short-lived (1^m to 20^m) grains at different depths ($0 < \tau < 0.4$). Spectroscopic investigations showed that these moustaches are explosion or outburst-like phenomena. The atoms are ejected out of a small grain in two opposite directions along the magnetic lines of force with velocities up to 2000 km/sec. The wings in great flares are composed of a cluster of moustaches of different widths. Spectroscopic study of hydrogen in the flares shows that its abundance is nearly stationary only for lower quantum levels ($n \leq 3$). The electron gas in flares cools very rapidly (fractions of a sec) as a result of inelastic collisions of electrons with H-atoms, the main process being collisional exitation and ionization from upper levels. There should exist a source generating the energy with the rate ~ 500 ergs/cm^3 sec to counterbalance these losses during the life-time of flare. The mechanisms of electromagnetic heating and the coexistence of coronal matter with that of the flare cannot provide the necessary amount of energy. High energy particles are the source of energy in the case of non-stationary processes considered. The D_3 line strengthing above flares and moustaches indicates that possible neutrons are also formed in these formations.

Shklovskiy, I. S.
THE POSSIBILITY OF EXPLAINING THE DIFFERENCES IN THE CHEMICAL COMPOSITION OF THE EARTH AND THE SUN BY THE THERMAL DISSIPATION OF LIGHT GASES (O Vozmozhnosti Ob'yasneniya Razlichiy v Khimicheskom Sostave Zemli i Solntsa Termicheskoy Dissipatsiyey). [1959] [18]p. 11 refs. F-TS-9596/V.
Order from LC or SLA mi$2.40, ph$3.30 59-19474

Trans. of Astronomicheskiy Zhurnal (USSR) 1951, v. 28, no. 4, p. 234-243.

Calculations are presented which show that thermal dissipation will not assure, under any assumptions whatsoever as to the temperature, a "sorting out" of the light elements.

Stepanov, V. Ye.
A NEW REGULARITY IN THE ORIGIN OF SUN-SPOTS (O Novoy Zakonomernosti v Vozniknovenii Solnechnykh Pyaten). [1959] [13]p. 2 refs. F-TS-9593/V.
Order from LC or SLA mi$2.40, ph$3.30 59-19526

Trans. of Astronomicheskiy Zhurnal (USSR) 1948, v. 25, no. 4, p. 209-215.

The period of revolution found for the magnetic axis of the sun differs considerably from the period of revolution obtained on the basis of measuring the displacements of spectral lines. The stability of the relation between the mean latitude of the appearance of sunspots on the magnetic longitude, from cycle to cycle, and the possibility of more exactly determining the value of the period of revolution by our method, indicate the erroneousness of determining the period of revolution from the 1914 series of plates. The effect of the inclination of the magnetic axis to the axis of rotation of the sun is expressed to a greater extent for the high-latitude spots. The dependence $\phi(L_M)$ is absent for the last 6 years of each cycle of solar activity. Apparently, with the increase of spot-forming activity, the total magnetic field of all the spots predominates over the general magnetic field of the sun.

Troitskiy, V. S.
A CONTRIBUTION TO THE THEORY OF RADIO EMISSION OF THE MOON. Appendix C-1. [1959] [32]p. 4 refs.
Order from LC or SLA mi$3.00, ph$6.30 59-20683

Trans. of Astronomicheskiy Zhurnal (USSR) 1954, v. 31, no. 6, p. 511-528.

A theoretical analysis of thermal radio emission of the moon is carried out here. The distribution of the effective radio temperature (radio brightness) of the moon's surface as dependent on the phase is found. The constant comprising the radio brightness of any surface element is proportional to the constant comprising the actual heating temperature of the element's surface and does not depend on the wave length. The variable comprising the element's radio brightness lags in phase in relation to the phase of heating of its surface by the sun, while the radio brightness amplitude decreases with an increase of depth of penetration by the radio wave in contrast to the depth of penetration of the electric wave, and the lag increases within the limit up to 45°. Expressions for the mean radio temperature of the entire moon are obtained, depending on its phase, with the assumption of a smooth, spherical surface. It is shown that the mean radio temperature also depends on the direction of the antenna's polarization and consists of a constant component and variable components. The constant component, calculated from optical data on the moon's temperature, is found to be equal to 170° ±15° K. The variable comprising the mean radio temperature lags in phase in comparison with the moon phase. The angle of lag practically coincides with the angle of lag of the variable part of radio brightness for the moon-disk center, but the amplitude comprises only 60 per cent of the amplitude of radio brightness vibrations in the same central part of the disk. The moon-surface roughness has practically no influence on the value of the mean radio temperature. The entire radio emission of the moon is polarized at the expense of decreasing the heating of its surface in the direction of the poles, while the degree of polarization, equal to about 4 per cent, correct to the highest harmonic curves of the illumination period, does not change with the moon's phases.

Troitskiy, V. S. and Zelinskaya, M. P.
DETERMINATION OF CERTAIN PROPERTIES OF SURFACE LAYERS OF THE MOON FROM ITS RADIO WAVE EMISSION AT A WAVELENGTH OF 3.2 CM. [1959] [8]p. 11 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20684

Trans. of [Astronomicheskiy Zhurnal] (USSR) 1955, v. 32, no. 6, p. 550-554.

The moon's radio temperature was measured at a wavelength $\lambda = 3.2$ cm. for various phases; the mean value has been found to be 170°K. Within ±7 per cent the radio wave emission was independent of the phase variation. On certain conjectured values of the conductivity and dielectric constant, as derived from comparisons with terrestrial rocks, the thermal conductivity coefficient of the lunar soil has been estimated as $k < 1.1 \times 10^{-4}$. The results obtained are in agreement with the known results of optical measurements. (Author)

BEHAVIORAL SCIENCES

Psychology

Faure, Jacques
PSYCHOLOGICAL AND THERAPEUTICAL PERSPECTIVES AS OFFERED THROUGH INTERMITTENT LIGHT STIMULATION: STIMULATED SUBNARCOSIS (Perspectives Psychologiques et Therapeutiques Offertes par la Stimulation Lumineuse Intermittente: la Subnarcose Stimulee). [1958] 63p. 53 refs. F-TS-9585/V.
Order from LC or SLA mi$3.90, ph$10.80 59-14130

Trans. of Encephale (France) 1952, v. 41, p. 243-288.

Morozov, V. M.
DEPTH PSYCHOLOGY AND PSYCHIATRY. 28 Sep 59, 21p. 12 refs. JPRS: L-999-N.
Order from OTS $0.75 59-13901

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1958, v. 58, no. 11, p. 1399-1406.

BIOLOGICAL SCIENCES

Anatomy and Physiology

HIGH ALTITUDE SCOUTS [AND] RESEARCH OF PARAMOUNT IMPORTANCE (Razvedchiki Bol'shikh Vysot (and) Issledovaniya Pervostepennogo Znacheniya). 3 Aug 59 [5]p. (1 fig. omitted). AF 1255981.
Order from LC or SLA mi$1.80, ph$1.80 59-19716

Trans. from Pravda [Moscow] 1959, no. 189, p. 6; a partial trans. from no. 189, p. 1 and a summary trans. of 3 articles on the same subject from Izvestiya (USSR) 1959, no. 160, p. 3.

The scouts are 2 dogs and a rabbit, test animals used in experiments on weightlessness. The ballistic rocket which served as a vehicle for the animals is not described. There is nothing specific on physiological findings.

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, 1959 (Soviet Abstracts. Biology).
Order from OTS $1.00

Contents:
Section T. Human and Animal Physiology.

1958, no. 22, Abstracts 101563-102373, JPRS: 1921-N, 59-13908
1958, no. 23, Abstracts 106060-106887, JPRS: 1897-N, 59-13885
1959, no. 1, Abstracts 3031-4008, JPRS: 1925-N, 59-13911

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

SECHENOV PHYSIOLOGICAL JOURNAL OF THE USSR, 1959, VOL. 45, NO. 3, P. 247-374. Oct 59, 1v
Order from PP $45.00/year

Trans. of Fiziologicheskiy Zhurnal SSSR, 1959, v. 45, no. 3, p. 261-388.

This issue includes a translation of the author and subject indexes to volumes 21-40 (1936-1954) of the journal (continuation).

SECHENOV PHYSIOLOGICAL JOURNAL OF THE USSR, 1959, VOL. 45, NO. 4. Sep 59, 127p.
Order from PP $45.00/year

Trans. of Fiziologicheskiy Zhurnal SSSR, 1959, v. 45, no. 4, p. 389-508.

Cortesi, C.
COCHLEOVESTIBULAR LESIONS IN SENESCENCE (Lesioni Cocleo-vestibolari nella Senescenza) tr. by William H. Everhardy. 2 Feb 59, 13p. 31 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-12942

Trans. of Giorn[ale di]Gerontol[ogia]. Suppl[emento] (Italy) 1957, no. 13, p. 175-180.

Gozulov, S. A.
THE ABILITY TO WITHSTAND AIR CURRENT ACTING UPON A PILOT DURING THE PROCESS OF EJECTION (O Perenosimosti Vozdushnogo Potoka Deystvuyushchego na Letchika pri Katapultirovanii). 24 Aug 59 [6]p. AF 1256031.
Order from LC or SLA mi$1.80, ph$1.80 59-19708

Trans. of Voyenno-Meditsinskiy Zhurnal (USSR) 1958, no. 12, p. 40-44.

Hoffmann-Berling, Hartmut.
THE MECHANISM OF A NEW CONTRACTION CYCLE DIFFERENT FROM THE MUSCULAR CONTRACTION (Der Mechanismus einer neuen, von der Muskelkontraktion Verschiedenen Kontraktionszyklus) tr. by P. Pallamary. 28 May 59, 21p. (3 figs. omitted) 25 refs.
Order from LC or SLA mi$2.70, ph$4.80 59-16575

Trans. of Biochimica et Biophysica Acta (Netherlands) 1958, v. 27, p. 247-255.

Nikolenko, K. A.
ONTOGENETIC CHANGES IN THE REFLEX REGULATION OF RENAL FUNCTION. 21 Sep 59, 15p. 11 refs. JPRS: L-990-N.
Order from OTS $0.50 59-13893

Trans. of Materialy po Evolyutsionnoy Fiziologii (USSR) 1957 [v. 2] no. 2, p. 151-159.

Petronio, Gino.
ON THE PRESSURE OF THE INTERSTITIAL FLUID IN THE NECK OF THE UTERUS AND IN THE LATERAL WALL OF THE VAGINA DURING PREGNANCY. 11 Apr 50, 3p. (1 table omitted).
Order from SLA mi$1.80, ph$1.80 59-20064

Trans. of Società Italiana di Biologia Sperimentale. Bollettino, 1945, v. 20 [no. 11] p. 678-680.

Sergeyev, V.
CARE FOR THE HEALTH OF FLIGHT AND TECHNICAL PERSONNEL (Zabota o Zdorov'ye Letnogo i Tekhnicheskogo Sostava) tr. by H. Holz. [1959] 5p. H-3831.
Order from OTS $0.50 59-21094

Trans. from Sovetskaya Aviatsiya (USSR) 1958, 8 Aug.

Specific directions are given for hygienic measures to be observed by personnel in hot climates, especially during the period preceding acclimatization.

Sheivekhman, B. E.
METHODS OF FIXING SPEECH HABITS DEVELOPED IN DEAF-MUTE CHILDREN PRACTICALLY DEPRIVED OF HEARING. 21 Sep 59, 17p. 9 refs.
JPRS: L-993-N.
Order from OTS $0.50 59-13896

Trans. of Materialy po Evolyutsionnoy Fiziologii (USSR) 1957 [v. 2] no. 2, p. 186-195.

Vereschagin, I. A.
SEX DETERMINATION OF FETUS BY CHANGES OF THE MORPHOLOGICAL COMPOSITION OF MATERNAL BLOOD. [1959] 14p.
Order from LC or SLA mi$2.40, ph$3.30 59-20716

Trans. of Sovetskaya Meditsina (USSR) 1959, v. 23, no. 5, p. 28-34.

Biochemistry

Barkan, G[eorg] and Schales, O[tto].
WATERSOLUBLE c-HEMIN FROM BLOOD, tr. by P. M. M. 5 Mar 57, 4p.
Order from SLA mi$1.80, ph$1.80 59-20757

Partial trans. [p. 181-187] of Hoppe-Seyler's Z[eitschrift für] Physiol[ogische] Chem[ie] (Germany) 1937, v. 246, p. 181-193.

Baumann, E.
ON CYSTINE AND CYSTEINE. [1959] 6p. 10 refs.
Order from SLA mi$1.80, ph$1.80 59-20763

Trans. of [Hoppe-Seyler's] Zeitschrift für Physiologische Chemie (Germany) 1884, v. 8 [no. 4] p. 299-305.

Chernyakov, I. N.
CHANGES IN BLOOD OXYGENATION DEPENDING ON PRESSURE SUIT EFFECTIVENESS (Izmeneniye Oksigenatsii Krovi na Bol'shikh Vysotakh v Zavisimosti ot Effektivnosti Vysotnogo Kompensiruyushchego Kostyuma - VKK). 9 Sep 59 [4]p. AF 1256075.
Order from LC or SLA mi$1.80, ph$1.80 59-19701

Trans. of Voyenno-Meditsinskiy Zhurnal (USSR) 1959, no. 5, p. 29-32.

Godnev, T. N. and Rotfarb, R. M.
A THEORY OF PORPHYRINOGEN FORMATION IN PLANTS. [1959] [4]p. 6 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20553

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1959, v. 127 [no. 4] p. 907-910.

Hamsik, A.
PREPARATION AND COUPLING OF GLOBIN. [1959] 3p.
Order from SLA mi$1.80, ph$1.80 59-20823

Partial trans. (p. 231-234) of Hoppe-Seyler's Zeitschrift für Physiologische Chemie (Germany) 1930, v. 187, p. 229-237.

Krasnovskiy, A. A. and Pakshina, Ye. V.
PHOTOCHEMICAL AND SPECTRAL PROPERTIES OF BACTERIOVIRIDIN OF GREEN SULFUR BACTERIA. [1959] [5]p. 15 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20554

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1959, v. 127 [no. 4] p. 913-916.

Waldschmidt-Leitz, Ernst and Willstatter, Richard.
[PANCREATIC ENZYMES]. V. ENTEROKINASE AND THE TRYPTIC ACTION OF THE PANCREA[TIC] GLAND. [1959] 5p. 21 refs.
Order from SLA mi$1.80, ph$1.80 59-20759

Partial trans. (p. 186-192) of Hoppe-Seyler's Zeitschrift für Physiologische Chemie (Germany) [1924] v. 132 [no. 4/6] p. 181-237.

Hoлn, Hans-Dieter and Bruns, Friedrich H.
QUANTITATIVE DETERMINATION OF L(+) LACTIC ACID WITH LACTIC DEHYDROGENASE (Quantitative Bestimmung von L(+)-Milchsäure mit Milchsäure-dehydrogenase) tr. by P. Pallamary. 9 Dec 58, 6p. (3 figs. omitted)
Order from LC or SLA mi$1.80, ph$1.80 59-12364

Trans. of Biochimica et Biophysica Acta (Netherlands) 1956, v. 21, no. 2, p. 378-380.

Yevstigneyev, V. B. and Savkina, I. G.
DARK AND PHOTOCHEMICAL REDUCTION OF PROTOCHLOROPHYLL. [1959] [12]p. 27 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20556

Trans. of *Biofizika (USSR) 1959, v. 4, p. 289-299.

Yevstigneyev, V. B. and Gavrilova, B. A.
PHOTOSENSITIZATION OF REDOX REACTIONS BY CHLOROPHYLL UNDER HETEROGENEOUS CONDITIONS. [1959] [6]p. 21 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20551

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1959, v. 126 [no. 2] p. 410-413.

Yevstigneyev, V. B. and Gavrilova, V. A.
STUDY OF THE MECHANISM OF PHOTOSENSITIZATION OF REDOX REACTIONS BY CHLOROPHYLL IN SOLUTIONS BY ELECTRICAL CONDUCTIVITY MEASUREMENTS. [1959] [6]p. 18 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20550

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1959, v. 127 [no. 1] p. 198-201.

Botany

Kleshnin, A. F. and Shul'gin, I. A.
OPTICAL PROPERTIES OF LEAVES. [1959] [4]p. 11 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20557

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1959, v. 125 [no. 5] p. 1158-1161.

Data are presented which indicate that in the process of evolution plants developed an optical system, leaf-plastids-pigments, adapted to the optimal absorption of light energy, included in a sufficiently narrow limit, independent of the species of individual plants.

Litvin, F. F., Krasnovskiy, A. A., and Rikhireva, G. T.
FORMATION AND TRANSFORMATION OF PROTOCHLOROPHYLL IN GREEN LEAVES. [1959] [4]p. 8 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-17719

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1959, v. 127 [no. 3] p. 699-701.

The fluorescence spectrum of extracts of green bean leaves grown in the light, and not subjected to darkness, clearly showed traces of protochlorophyll. After placing these plants in the dark, even in the first 2 hours a significant increase in protochlorophyll content was detected. In the following hours the protochlorophyll content continued to increase with somewhat less speed. On transfer of the plants from dark to light, the accumulated protochlorophyll very quickly disappears. In the first 5-10 min the accumulated protochlorophyll diminishes several fold, after 15-17 min the protochlorophyll corresponds to its content in the undarkened leaf. Results indicate that the biosynthesis of chlorophyll in green leaves also is accomplished with the participation of an active form of protochlorophyll.

General Biology

BULLETIN OF EXPERIMENTAL BIOLOGY AND MEDICINE, 1959, VOL. 47, NO. 3, P. 265-390. 1959, 1v.
Order from CB $10.00, $20.00/year

Trans. of Byulleten' Eksperimental'noy Biologii i Meditsiny (USSR) 1959, v. 47, no. 3, p. 3-[123].

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958, NO. 23 (Soviet Abstracts. Biology). 30 Sep 59, 28p. JPRS: 1924-N.
Order from OTS $1.00 59-13910

Contents:
Section B. General Biology. Abstracts 103188-103392.

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Köhler, Rudolf.
ALGINIC ACID AND ITS APPLICATIONS. 23 Mar 56, 9p. [summary refs. omitted].
Order from SLA mi$1.80, ph$1.80 59-20793

Trans. of die Stärke (West Germany) 1953, v. 5 [no. 3] p. 65-69.

Makarov, P. V.
RECENT DATA ON THE STRUCTURE AND PROPERTIES OF THE CELL NUCLEUS. 25 Aug 59, 32p. (16 figs. omitted) 147 refs. JPRS: L-934-N.
Order from OTS $1.00 59-13827

Trans. of Arkhiv Anatomii, Gistologii, i Embriologii (USSR) 1958, v. 35, no. 6, p. 3-21.

Data are discussed with respect to the problems of (1) chromosomal continuity, and (2) the essence of the prophase changes of nuclei and of the constancy of DNA in the cell. The first 44 literature references are Soviet.

Microbiology

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958 (Soviet Abstracts. Biology).
Order from OTS $1.00

Contents:
Section E. Virology.

No. 19, Abstracts 85757-85872, JPRS: 1942-N, 59-13933
No. 23, Abstracts 103470-103595, JPRS: 1918-N, 59-13906

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958 (Soviet Abstracts. Biology).
Order from OTS $1.00

Contents:
Section F. Microbiology.

No. 19, Abstracts 85880-86250, JPRS: 1940-N, 59-13934
No. 23, Abstracts 103596-103948, JPRS: 1939-N, 59-13932

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Anatoliy, S. A.
INFLUENCE OF INTENSIFIED AERATION ON THE DYNAMICS OF MULTIPLICATION OF PERTUSSIN BACILLI IN LIQUID MEDIUM. Communication no. 1 Toward a Methodology of Preparation of Antipertussic Vaccines. [1959] 14p. 5 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20944

Trans. of Zhur[nal] Mikrobiol[ogii] Epidemiol[ogii i] Immunobiol[ogii] (USSR) 1955 [v. 26] no. 11, p. 77-83.

Goryunova, S. V.
THE TECHNIQUE OF APPLYING THE METHOD OF LUMINESCENCE MICROSCOPY FOR HYDROBIOLOGICAL RESEARCH, tr. by J. W. G. Lund. 1956 [17]p. (7 figs. omitted) 7 refs. M.70.
Order from LC or SLA mi$2.40, ph$3.30 59-18715

Trans. of Russian mono, Zhizn' Presnykh Vod SSSR, v. 4, pt. 1, chap. 39, p. 272-278.

Weygand, Friedrich, Wacker, Adolf, and Wirth, Friedrich.
VITAMIN B_{12}, PURINES AND PYRIMIDINES REQUIREMENT OF LACTOBACILLUS LEICHMANNII 313, tr. by P. M. M. 13 Dec 56, 19p. 47 refs.
Order from SLA mi$2.40, ph$3.30 59-20795

Trans. of Z[eitschrift für] Naturforsch[ung] (West Germany) 1951, v. 6B [no. 1] p. 25-34.

Neurology and Psychiatry

Lereboullet, J. and Pluvinage, R.
NEUROLOGICAL USE OF MASSIVE DOSES OF VITAMIN B_{12} (1000 γ FOR EACH INJECTION) tr. by P. M. M. 15 June 54, 11p. 9 refs.
Order from SLA mi$2.40, ph$3.30 59-20971

Trans. of Semaine des Hôpitaux de Paris (France) 1953, v. 29 [no. 37] p. 1849-1854.

Mikhaleva, O. A.
MECHANISMS PRODUCING INHIBITORY INFLUENCES ON THE CARDIO-VASCULAR ACTIVITY IN ANIMALS (PUPPIES) DURING THEIR ONTOGENETIC DEVELOPMENT. 17 Sep 59, 11p. 10 refs.
JPRS: L-982-N.
Order from OTS $0.50 59-13879

Trans. of Materialy po Evolyutsionnoy Fiziologii (USSR) 1956 [v. 1] no. 1, p. 246-252.

Pathology

PROBLEMS OF ONCOLOGY, 1958, VOL. 4, NO. 3, P. 275-404. Sep 59, 1v.
Order from PP $30.00/year

Trans. of Voprosy Onkologii (USSR) 1958, v. 4, no. 3, [p. 257]-380.

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958 (Soviet Abstracts. Biology).
Order from OTS $1.00

Contents:
Section U. General Problems of Pathology.

No. 19, Abstracts 89434-89753, JPRS: 1945-N, 59-13937
No. 22, Abstracts 102375-102716, JPRS: 1955-N, 59-13953

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Cannavo, L. and Ortoleva, G.
HYPOGLUCEMIZING AND ANTI-DIABETIC ACTION OF CITRIC ACID (Azione Ipoglicemizzante ed Antidiabetica dell'Acido Citrico). [1959] [3]p.
Order from SLA mi$1.80, ph$1.80 59-20069

Trans. of Società Italiana di Biologia Sperimentale. Bollettino, 1939, v. 14 [no. 11] p. 740-741.

Danilov, Yu. Ye.
PROBLEMS OF MEDICAL CADRES IN KIRGIZIYA. 22 Oct 59, 8p. JPRS: L-1022-N.
Order from OTS $0.50 59-13955

Trans. of Sovetskoye Zdravookhraneniye (USSR) 1959, v. 18, no. 1, p. 11-15.

Desoille, N., Dérobert, L., and others.
SILICA IN THE BLOOD: ITS PHYSIOPATHOLOGICAL SIGNIFICANCE IN SILICOSIS. 6 Oct 59 [17]p. 3 refs.
Order from SLA mi$2.40, ph$3.30 59-20960

Partial trans. (p. 5-17) of Arch[ives des] Maladies Profess[ionnelles, de] Med[ecine du] Travail et [de] Securite Sociale (France) 1955, v. 16 [no. 1] p. 5-19.

Dudan, A.
ESSENTIAL POLYUNSATURATED FATTY ACIDS, tr. by P. M. M. 19 July 57, 4p.
Order from SLA mi$1.80, ph$1.80 59-20946

Trans. of Praxis (Switzerland) 1956, v. 45, no. 10, p. 219-223.

Seventy patients were treated with Linacidine (capsules or drops consisting of a mixture of highly purified polyunsaturated linoleic and linolenic fatty acid esters). These patients presented symptoms of digestive disturbance of alimentary origin, urticaria and allergy, migraine and asthma, hepatic disturbances, calcified hilus adenopathy, and various types of eczema, acne etc. Fifty-nine favorable results are reported.

Herrmann, K. O. and Jung, H.
METABOLIC CANCER THERAPY, tr. by H. Warfield. 20 May 59, 38p. 10 refs.
Order from LC or SLA mi$2.70, ph$4.80 59-16347

Trans. of mono. die Stoffwechselbehandlung der Krebserkrankung, Lich/Oberhessen.

Impaired respiration in the cell is considered to be the sole factor causing its neoplastic degeneration. Therapy consists in a normalization of the metabolism by such measures as blood transfusions, mud baths, low-glucose diet, introduction of specific respiratory enzymes, administration of vitamin C. Case histories are cited.

Kereyev, N. I.
COURSES OF DEVELOPMENT OF SOVIET PUBLIC HEALTH IN KAZAKHSTAN. 22 Oct 59, 8p. JPRS: L-1023-N.
Order from OTS $0.50 59-13956

Trans. of Sovetskoye Zdravookhraneniye (USSR) 1959, v. 18, no. 1, p. 16-20.

Krawczynski, Jerzy and Zelazowska, Maria.
APPLICATION OF THE SO-CALLED DRY TESTS IN URINALYSIS IN DIAGNOSTIC LABORATORIES AND IN GENERAL PRACTICE. [1959] 19p. (1 table refs. omitted).
Order from SLA mi$2.40, ph$3.30 59-20717

Trans. of Polski Tygod[nik] Kel[arski] 1958, v. 13 [no. 45] p. 1788-1793.

Latsch, Guenther
THE SITUATION ON MEDICAL, PARTICULARLY CLINICAL, RESEARCH. 31 Dec 58, 6p. JPRS Trans. L-736-D.
Order from OTS $0.50 59-13038

Trans. of Deutsche Medizinische Wochenschrift (West Germany) 1957, no. 28, p. 1172-1174.

Problems relating to the meshing of clinical practice and medical research in large institutions in West Germany are discussed.

Mauze, J.
THE LONG ACTING ANDROGENS IN POSTAMEBIC RECTOCOLITIS (les Androgènes Retard dans la Recto-colite Post-amibienne). [1959] 4p.
Order from SLA mi$1.80, ph$1.80 59-20963

Trans. of Soc[iéte de] Path[ologie] Exot[ique]. Bull[etin] (France) 1958, v. 51 [no. 4] p. 500-501.

Schmidt, Vagn.
NEW METHODS OF URINALYSIS. [1959] 6p.
Order from SLA mi$1.80, ph$1.80 59-20700

Trans. of Ugeskrift [for] Laeger (Denmark) 1958, v. 120 [no. 42] p. 1407-1408.

The methods described have the common quality of simplicity: most can be run by non-technical personnel.

Stoppani, Andres O. M.
DIABETES AND THE METABOLISM OF CITRIC ACID (Diabetes y Metabolismo del Acido Citrico). [1959] 21p. 46 refs.
Order from SLA mi$2.70, ph$4.80 59-20065

Trans. of Medicina, Buenos Aires (Argentina) 1946, v. 6 [no. 4] p. 389-404.

Wiesener, H[einrich].
EXPERIMENTAL AND CLINICAL INVESTIGATIONS OF ANEMIAS DUE TO INFECTION, TREATED WITH TRIVALENT IRON. 16 Apr 52, 16p. 31 refs.
Order from SLA mi$2.40, ph$3.30 59-20703

Trans. of Monatsschr[ift] f[ür] Kinderheilkunde (Germany) 1951, v. 99 [no. 9] p. 325-328.

Pharmacology and Toxicology

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958 (Soviet Abstracts. Biology).
Order from OTS $1.00

Contents:
Section V. Pharmacology and Toxicology.

No. 19, Abstracts 89779-90054, JPRS: 1916-N, 59-13904
No. 22, Abstracts 102735-103019, JPRS: 1926-N, 59-13912

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Bachmann, W.
EXPERIENCES WITH AN ANTITUSSIVE AGENT IN PEDIATRICS. [1959] 2p.
Order from SLA mi$1.80, ph$1.80 59-20979

Trans. of Med[izinische] Klin[ik] (Germany) 1959 [v. 54] no. 16, p. 800.

Biesalski, P. and Marquardt, K.
TREATMENT OF RHINITIS OF EARLY CHILDHOOD; THERMOELECTRIC STUDIES ON DECONGESTANT NASAL DRUGS (Zur Behandlung der Rhinitis im Frühen Kindesalter; Thermoelektrische Untersuchungen an Abschwellenden Nasenmitteln). [1959] 14p. 22 refs.
Order from SLA mi$2.40, ph$3.30 59-20965

Trans. of Schweiz[erische] Med[izinische] W[ochen]schr[ift] 1959, v. 89 [no. 19] p. 510-512.

Bimler, R.
AFTER EFFECTS OF A CHOLECYSTECTOMY AND TREATMENT WITH THE GALL BLADDER WALL HORMONE, CHOLECYSMON. 3 May 51, 13p. 14 refs.
Order from SLA mi$2.40, ph$3.30 59-20705

Trans. of Münch[ener] Med[izinische] W[o]ch[en]sch[rift] (Germany) 1937, v. 84 [no. 37] p. 1458-1460.

Christoffel, P. and Kolberg, H.
THE ANTITUSSIVE EFFECTS OF AN AMINONITRILE. [1959] 8p. (refs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20699

Trans. of Med[izinische] Klin[ik] (Germany) 1958, v. 53 [no. 35] p. 1507-1509.

Demers, J. Ulysse.
PHARMACEUTICAL REVUE. STUDY OF PYROGENIC SUBSTANCES IN RELATION TO SOLUTIONS ADMINISTERED BY INJECTION. 17 Mar 50, 20p. 93 refs.
Order from SLA mi$2.40, ph$3.30 59-20972

Trans. of Laval Médical (Canada) 1949, v. 14 [no. 7] p. 908-941.

Hoff-Jørgensen, E., Skouby, A. P., and Andresen, J. Gad.
MICROBIOLOGICAL STANDARDIZATION AND CLINICAL ACTIVITY OF CONCENTRATED PREPARATIONS OF THE "INTRINSIC FACTOR". [1959] [13]p. 16 refs.
Order from SLA mi$2.40, ph$3.30 59-20708

Trans. of Nordisk Medicin (Sweden) 1952, v. 48, no. 51, p. 1754-1758.

Microbiological and clinical investigations are described which were undertaken in order to clarify problems relating to assay of the intrinsic factor of stomach preparations used in therapy of pernicious anemia. The underlying hypothesis is that such preparations contain a compound which prevents the intestinal coli organisms from taking up vitamin B_{12}.

Kemper, F[ritz].
EXPERIMENTAL BASES FOR A THERAPEUTIC USE OF LITHOSPERMUM OFFICINALE FOR BLOCKING OF ANTERIOR PITUITARY HORMONES; (Experimentalle Grundlagen für eine Therapeutische Anwendung von Lithospermum Officinale zur Blockierung von Hormonen des Hypophysenvorderlappens) Rept. no. 1. (1. Mitteilung) [1959] [32]p. (5 figs. refs. omitted)
Order from SLA mi$3.00, ph$6.30 59-20966

Trans. of Arzneimittel-Forsch[ung] (West Germany) 1959, v. 9 [no. 6] p. 368-375.

Krause, D.
PHARMACOLOGY OF THE α-ISOPROPYL -α (β-DIMETHYLAMINOPROPYL)- PHENYLACETONITRILE CITRATE. [1959] 6p. (refs. summary omitted).
Order from SLA mi$1.80, ph$1.80 59-20701

Trans. of Arzneimittel-Forschung (West Germany) 1958, v. 8 [no. 8] p. 553-554.

Norina, O. A.
EFFECT OF DIURETICS IN THE EARLY POSTNATAL PERIOD. 21 Sep 59, 14p. 17 refs. JPRS: L-992-N.
Order from OTS $0.50 59-13895

Trans. of Materialy po Evolyutsionnoy Fiziologii (USSR) 1957 [v. 2] no. 2, p. 172-180.

Nordlander, Margit and Sandell, Erik.
SOME EXPERIMENTS IN THE FIELD OF ISOTONICITY. 14 Apr 53, 15p. 13 refs.
Order from SLA mi$2.40, ph$3.30 59-20707

Trans. of Pharm[aceutica] Acta Helv[etiae] (Switzerland) 1952, v. 27 [no. 7] p. 179-187.

Pribrom, B. O.
A DIGESTIVE HORMONE IN THE GALL-BLADDER WALL WITH A LIPOLYTIC ACTIVATOR EFFECT (CHOLECYSMON). [1959] [4]p.
Order from SLA mi$1.80, ph$1.80 59-20704

Trans. of Münch[ener] Med[izinische] Woch[en]schr[ift] (Germany) 1935, v. 82 [no. 46] p. 1823-1828.

Segaud, Elisée.
IMPROVEMENTS IN THE MANUFACTURE OF SUPPOSITORIES. 4 Dec 50, 4p. (5 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-20062

Trans. of French patent 682,877, gr. 19, cl. 2, appl. 7 Oct 29, granted 18 Feb 30, pub. 3 June 30.

Serpi, G. and Brundo, P.
CLINICAL EXPERIENCE ON THE DIURETIC ACTION OF HYDROCHLOROTHIAZIDE (Esperienze Cliniche sull'Azione Diuretica dell'Idroclorotiazide). [1959] 20p. 16 refs.
Order from SLA mi$2.40, ph$3.30 59-20961

Trans. of Minerva Medica (Italy) 1959, v. 50 [no. 42] p. 1632-1638.

Sorcini, G., Monti, G., and Pace, G. de
CLINICAL EXPERIMENTS WITH A NEW DIURETIC PREPARATION WITH SULFONAMIDE STRUCTURE (Sperimentazione Clinica di un Nuovo Preparato Diuretico a Struttura Sulfamidica). [1959] 16p. 10 refs.
Order from SLA mi$2.40, ph$3.30 59-20962

Trans. of Minerva Medica (Italy) 1959, v. 50 [no. 42] p. 1620-1624.

Trachtenberg, D. M., Rodionowskaya, E. I. and others.
PRELIMINARY DATA ON THE COMPARISON OF THE PROPERTIES OF ANTIBIOTIC SUBSTANCES OF THE TYPE OF STREPTOTHRICINS PRODUCED BY DIFFERENT ACTINOMYCETES. [1959] 11p. 9 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20806

Trans. of Antibiotiki (USSR) 1958, v. 3, no. 6, p. 36-41.
Another translation is available from ATS $7.50 as ATS-32L30R [1959] 6p.

Radiobiology

Arbuzov, S. Ya.
PROTECTIVE ACTION OF CERTAIN PHARMACOLOGICAL AGENTS IN RADIATION INJURIES. 6 Dec 58, 15p. (10 figs. omitted) JPRS: L-568-N.
Order from OTS $0.50 59-11177

Trans. of Akademiya Meditsinkikh Nauk SSSR. Vestnik, 1958, v. 13, no. 6, p. 10-22.

Presman, A. S.
ON THE PHYSICAL PRINCIPLES OF THE BIOLOGICAL ACTION OF (CENTIMETRIC) MICROWAVES (O Fizicheskikh Osnovakh Biologicheskogo Deystviya Santimetrovykh Voln) tr. by Claudius F. Mayer. July 59 [23]p. (5 figs. omitted) 40 refs. H 3828.
Order from OTS $0.75 59-21107

Trans. of Uspekhi Sovremennoy Biologii (USSR) 1956, v. 41, no. 1, p. 40-54.

This survey of theoretical and experimental work on the effects of microwaves upon tissues is based on a bibliography which is primarily British and American. (Seven Soviet References)

Shteding, M. N., Nosova, L. M. and others.
THE QUESTION OF UTILIZATION OF POLYMERIC MATERIALS BASED ON POLYVINYLCHLORIDE FOR THE MANUFACTURE OF MEANS FOR INDIVIDUAL PROTECTION AGAINST RADIOACTIVE RADIATIONS (K Voprosu ob Ispol'zovanii Polimernykh Materialov na Baze Polivinnilkhlorida dlya Izgotovleniya Sredstv Individual'noy Zashchity ot Radioaktivnykh Izluchenii). Feb 58 [7]p. 6 refs. C. T. S. 427.
Order from LC or SLA mi$1.80, ph$1.80 59-19616

Trans. of Khimicheskaya Promyshlennost' (USSR) 1956, no. 7, p. 408-411.

A method for comparative evaluation of the sorption - desorption properties of polymeric materials has been developed. The effect of the individual components of polyvinylchloride plastic formulations on their sorption-desorption characteristics has been investigated. Formulations for polyvinylchloride plastics which combine ease of cleansing from radioactive contamination with the necessary range of physico-mechanical and processing characteristics have been developed. These materials may be used for the manufacture of the personal protective equipment and the various protective films required in work with radioactive substances. (Author's conclusions)

Surgery

Bäyer, H. von.
NATURIN, A NEW DRESSING FOR WOUNDS. [1959] 2p.
Order from SLA mi$1.80, ph$1.80 59-20706

Trans. of Münchener Medizinische Wochenschrift (Germany) 1939, v. 86, no. 22, p. 860.

Naturin is a parchment-like substance produced by the tanning industry. It is thin as paper, softens readily in lukewarm water, and is selectively permeable. The material can be sterilized and applied directly to wounds. It is stated that Naturin relieves the tension of sutures.

Nageotte, J.
USE OF GRAFTS OF DEVITALIZED CONNECTIVE TISSUE (TENDON AND NERVE) IN REPARATIVE SURGERY. [1959] 4p.
Order from SLA mi$1.80, ph$1.80 59-20702

Trans. of la Press Médicale (France) 1939, v. 47, no. 74, p. 1365-1366.

Struchkov, V. I.
THE STATUS OF SURGICAL SERVICE AND THE TASKS OF SURGEONS IN THE USSR. 30 Sep 59, 11p. JPRS: L-1001-N.
Order from OTS $0.50 59-13905

Trans. of Sovetskoye Zdravookhraneniye (USSR) 1959, v. 18, no. 7, p. 3-9.

Zoology

REFERATIVNYY ZHURNAL. BIOLOGIYA (USSR) 1958 (Soviet Abstracts. Biology).
Order from OTS $1.00

Contents:
Section G. Zooparasitology.

No. 19, Abstracts 86260-86352, JPRS: 1941-N, 59-13935
No. 23, Abstracts 103951-104128, JPRS: 1933-N. 59-13917

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Avetikyan, B. G.
IMMUNOLOGICAL REACTION IN FISHES (Ob immunologicheskoy Reaktsii u Ryb). July 59 [14]p. 2 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20954

Trans. of Akad[emiya] Nauk SSSR. Ikht[iologisheskaya] Kom[issiya. Trudy Soveshchanii] 1958, no. 8, p. 387-392.

Bezrukova, E. A.
THE FECUNDITY OF WHITE SEA HERRING (Plodovitost' Belomorskikh Sel'der). Oct 59 [11]p. 7 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20957

Trans. of Zool[ogicheskiy] Zhurn[al] (USSR) 1938, v. 17, no. 1, p. 175-179.

Bodrova, N. V. and Krayukhin, B. B.
FISHES' REACTION TO ELECTRIC CURRENT (O Reaktsii Ryb na Vozdeystviye elektricheskim Tokom). July 59 [19]p. 31 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20951

Trans. of Aka[emiya] Nauk SSSR. Ikht[iologisheskaya] Kom[issiya. Trudy Soveshchanii] 1958, no. 8, p. 124-131.

Drabkina, B. M.
INVESTIGATING THE BLOOD OF MATURE KURA SALMON AND THEIR YOUNG (Issledovaniye Krovi u proizvoditeley i Molodi Kurinskovo lososya). July 59, [16]p. 8 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20953

Trans. of Akad[emiya] Nauk SSSR. Ikht[iologisheskaya] Kom[issiya. Trudy Soveshchanii] 1958, no. 8. p. 372-379.

Lovetskaya, A. A.
ON THE REACTION TO LIGHT IN THE SPRAT (O Reaktsii Kil'ki na Svet). July 59 [7]p. 5 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20956

Trans. of Akad[emiya] Nauk SSSR. Ikht[iologisheskaya] Kom[issiya. Trudy Soveshchanii] 1956, no. 8, p. 121-123.

Nusenbaum, L. M.
THE BEHAVIOR OF FISHES IN AN ELECTRIC FIELD AND THEIR PROTECTION DURING HYDRAULIC CONSTRUCTION (O Povedemii ryb v elektricheskom Pole v Svyazi s Problemoy ikh Okhrany pri Gidrostroitel'stve). July 58 [20]p.
Order from LC or SLA mi$2.40, ph$3.30 59-20950

Trans. of Akad[emiya] Nauk SSSR. Ikht[iologisheskaya] Kom[issiya. Trudy Soveshchanii] 1958, no. 8. p. 132-141.

A barrier which consists of one row of electrodes fed through a sectional transformer has been shown to be effective in turning away migrating fish. The electrodes are grouped in sections of 12 units each. A successively increasing intensity flows through the sectional transformer to each pair of electrodes, according to the distance from the center of the section. An electric field is thus formed which has a wide zone in which a fish sensing the field can respond with a defense reaction. Zones in which the fish may be stunned and traumatized are reduced. This device, in various field tests, proved to be about 75% effective. It is suggested that the investigation of the combined action of an electric field and sound and low-frequency vibrations might be fruitful.

Ostroyumova, I. N.
BLOOD CELLS IN DEVELOPING SALMON (Formennyye Elementy Krovi v Razvitii Lososya). July 59 [15]p. 13 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20955

Trans. of Akad[emiya] Nauk SSSR. Ikht[iologisheskaya] Kom[issiya. Trudy Soveshchanii] 1958, no. 8, p. 380-386.

Vinogradov, L. G. and Neyman, A. A.
THE ACCLIMATIZATION OF LOBSTER IN THE USSR (Ob Akklimatizatsii Omara v SSSR). July 59, 17p. 29 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20947

Trans. from Zoologicheskiy Zhurnal (USSR) 1959, v. 38, no. 2.

On the basis of data available in the literature of lobster ecology, it is concluded that lobster acclimatization in the Black Sea could be realized only by means of a hatchery supplied with water of a somewhat higher salinity than that of the Black Sea. There are also grounds for carrying out experiments on lobster acclimatization in Kandalaksha Bay of the White Sea.

Zusser, S. G.
A STUDY OF THE CAUSES OF DIURNAL VERTICAL MIGRATIONS IN FISHES (K Izucheuiyu Prichin Sutochnykh Vertikal'nykh Migratsiy Ryb). July 59 [15]p. 24 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20952

Trans. of Akad[emiya Nauk SSSR. Ikht[iologisheskaya] Kom[issiya. Trudy Soveshchanii] 1958, no. 8, p. 115-120.

CHEMISTRY

*AKADEMIYA NAUK SSSR. OTDELENIYE KHIMICHESKIKH NAUK. IZVESTIYA, 1959, NO. 6, P. 955-1143 (News of the Academy of Sciences of the USSR, Department of Chemical Sciences). [1959] 1v. [SOV]-62-59-6-(1-36)/36.
Order from OTS $0.70, $4.00/6 mo. PB 141 055T-19
Foreign $0.95, $5.50/6 mo.

Consists of abstracts in English.

JOURNAL OF APPLIED CHEMISTRY OF THE USSR, 1958, VOL. 31, NO. 10, P. 1431-1603. 1959, 1v.
Order from CB $7.50, $60.00/year

Trans. of Zhurnal Prikladnoy Khimii (USSR) 1958, v. 31, no. 10, p. 1445-[1615].

REFERATIVNYY ZHURNAL. KHIMIYA (USSR) 1959 (Soviet Abstracts. Chemistry).
Order from OTS $1.00

No. 5, Abstracts 14263-18048, JPRS: 1913-N, 59-13902
No. 6, Abstracts 18138-22039, JPRS: 1934-N, 59-13927
No. 10, Abstracts 33884-37491, JPRS: 1892-N, 59-13882
No. 11, Abstracts 37568-41213, JPRS: 1893-N, 59-13884

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia, excluding the USSR.

Analytical Chemistry

Blix, Gunnar.
MICRODETERMINATION OF GLYCEROL IN FAT AND PHOSPHATIDES, tr. by G. G. Schwartz. 1 Nov 50, 7p. (1 illus. omitted) 6 refs.
Order from SLA mi$1.80, ph$1.80 59-20618

Trans. of Mikrochimica Acta (Austria) 1937, v. 1 [no. 1] p. 75-77.

Dono, T[sorumatsu], Morinaga, K[enichi], and Nomura, T[suyoshi].
POLAROGRAPHIC BEHAVIOR OF COMMON METALS IN ETHYLENEDIAMINE TETRAACETIC ACID MEDIA. [1959] 13p. (15 figs. 2 tables omitted) 17 refs.
Order from SLA mi$2.40, ph$3.30 59-20893

Trans. of [Nagoya Kogya Daigku Gakuho] (Japan) 1955, v. 7, p. 165-171.

Kofler, A.
MELTING-POINT CURVES WITH INFLECTION POINTS AND MIXTURE GAPS OF THE LIQUID PHASES IN ORGANIC BINARY SYSTEMS. 17 Nov 49, 6p. 9 refs.
Order from SLA mi$1.80, ph$1.80 59-20718

Trans. of Zeitschrift für Analytische Chemie (West Germany) 1948, v. 128, p. 543-549.

Organic binary systems are described that show either inflection curves or miscibility gaps in liquid phases. Pairs of substances with points of inflection occur exclusively in cases that can be explained by the proximity of a miscibility gap in the liquid phases.

Maciag, A. and Schöntal, R.
MODIFICATION OF THE REACTION OF PAULY IN CONNECTION WITH MICROCOLORIMETRIC (PHOTOMETRIC) DETERMINATION OF IMIDAZOLE BODIES (HISTAMINE). [1959] 7p. 10 refs.
Order from SLA mi$1.80, ph$1.80 59-20672

Trans. of Mikrochemie (Austria) 1938, v. 24, p. 243-250.

Inorganic Chemistry

Albert, Ph. and Mahé, J.
ON THE PREPARATION OF LITHIUM HYDRIDE (Sur une Préparation de l'Hydrure de Lithium) tr. by B. J. Faraday. 24 July 59 [9]p. 8 refs. NRL Trans. no. 743.
Order from OTS $0.50 59-21117

Trans. from Société Chimique de France. Bulletin. 1950, no. 12, p. 1165-1167.

An apparatus is described which allows the preparation of a kg of lithium hydride at each operation. The product is obtained by a hydrogenation of metallic lithium with a total yield of 98.5% of the theoretical amount. The lithium hydride prepared with this apparatus a mixture of white and bluish crystals. These two forms apparently possess the same degree of purity.

Dieckmann, Th. and Hanf, O.
NOTE ON CHROMOUS OXIDE. [1959] 5p. 6 refs.
Order from SLA mi$1.80, ph$1.80 59-20863

Trans. of [Zeitschrift für] Anorg[anische] Chem[ie] (Germany) 1914, v. 86, p. 301-304.

Fricke, R. and Röbke, F.
EXPERIMENTS ON THE COMPLEX CHEMICAL BEHAVIOR OF BERYLLIUM. VI, tr. by P. M. McCann. [1959] 10p. 23 refs.
Order from SLA mi$1.80, ph$1.80 59-20764

Trans. of Z[eitschrift für] Anorg[anische] Chemie. (Germany) 1928, v. 170 [no. 1/2] p. 25-34.

The preparative method for obtaining a number of additional complex compounds of beryllium is described. These preparations were made for the purpose of obtaining a more complete survey of all the possible combinations. The working method was the same as previously used. An attempt was made to complete the results by thermal analysis. However, in most cases the use of this method caused great difficulties. (Author)

Schischokin, W. and Agejewa, W.
HARDNESS OF METAL ALLOYS AT VARIOUS TEMPERATURES. [1959] 3p. (2 figs. omitted) 2 refs.
Order from SLA mi$1.80, ph$1.80 59-20436

Partial trans. of Zeit[schrift] für Anorgan[ische] Chemie (Germany) 1930, v. 193, no. 3, p. 237-244.

Shevchenko, V. B., Shilin, I. V., and Solovkin, A. S.
EXTRACTION OF PERCHLORIC ACID AND URANYL PERCHLORATE WITH TRIBUTYL PHOSPHATE. [1959] 7p. 12 refs. CCT-1652.
Order from LC or SLA mi$1.80, ph$1.80 AEC-tr-3655

Trans. of [Zhurnal Neorganicheskoy Khimii] (USSR) 1958, v. 3, no. 1, p. 225-230.

The distribution of uranyl perchlorate and of $HClO_4$ between water and an organic solution containing TBP was investigated. It was found that the passage of $UO_2(ClO_4)_2$ or perchloric acid into TBP is determined by the ionic strength of the aqueous phase, the concentration of TBP in the organic solution, the nature of the diluent, and also (for uranyl perchlorate) the salting-out properties of cations of alkali metals. It was shown that the graphic method of determination of the composition of the complex compound extracted into the TBP is not suitable in the case of uranyl perchlorate and perchloric acid. (Author)

Songina, O. A.
RUBIDIUM AND CESIUM (Rubidiy i Tseziy). [1959] [14]p. 36 refs. F-TS-9782/III.
Order from LC or SLA mi$2.40, ph$3.30 59-19459

Trans. of mono. Redkiye Metally [Moscow] 1951, p. 252-259.

Organic Chemistry

AROMATIC DICARBOXYLIC AND POLYCARBOXYLIC ACIDS FROM ALKALINE EARTH SALTS OF OTHER CARBOXYLIC ACIDS. [8 Oct 59] 10p.
Order from RIS $28.00 RIS rept. 96942

Trans. of German patent application H 27 158 (12o, 14) DAS 1 028 984, by Henkel & Cie, G. m. b. H., Duesseldorf-Holthausen, filed 26 May 56, pub. 30 Apr 58.

A process is described for producing aromatic dicarboxylic and polycarboxylic acids or their salts or derivatives. The process is characterized in that the alkaline earth salts of aromatic monocarboxylic and dicarboxylic acids are heated to temperatures between 200 and 500°C in the presence of an inert gas such as carbon dioxide and if necessary with catalytically effective metals or metal compounds, the salts obtained being converted into the free acids or their derivatives, if necessary, by conventional methods.

AROMATIC OR AROMATIC-HETEROCYCLIC NITRILES AS STARTING MATERIALS FOR THE HENKEL PROCESS. 8 Oct 59, 10p.
Order from RIS $23.50 RIS rept. 96943

Trans. of German patent application H 21 834 (12o/14) DAS 1 027 656, by Henkel & Cie. G. m. b. H., Duesseldorf-Holthausen, filed 19 Sep 56, pub. 10 Apr 58.

A process is described for producing aromatic or aromatic dicarboxylic and polycarboxylic acids, their salts or derivatives. The process is characterized in that the aromatic or aromatic-heterocyclic nitriles or their corresponding acid amides are heated to temperatures above 250°C in the presence of free or bound carbon dioxide at increased pressures and in the presence of acid binding agents and suitably with catalysts,

the salts obtained being converted by conventional methods into the free acids or acid derivatives if necessary.

GOOD YIELDS OF TEREPHTHALIC ACID UNDER MODERATE PRESSURES. [8 Oct 59] 10p.
Order from RIS $22.50 RIS rept. 96941

Trans. of German patent application H 28 335 (12o, 14) DAS 1 026 300, by Henkel & Cie. G. m. b. H., Duesseldorf-Holthausen, filed 15 Oct 56, pub. 20 Mar 58.

A process is described for producing aromatic dicarboxylic and polycarboxylic acids or their salts or derivatives by heating the alkali salts of aromatic monocarboxylic acids in the presence of carbon dioxide under pressure as well as in the presence of an acid-binding agent, the resulting salts being converted into the free acids or their derivatives if necessary. The process is characterized in that the heating is carried out in the presence of substances capable of binding the water arising from the reaction or reacting with it. The starting materials are potassium salts of aromatic monocarboxylic acids or mixtures of the sodium and potassium salts. The water-binding agent is a carbide, preferably aluminum or calcium carbide.

THERMAL REARRANGEMENT OF ALKALI SALTS OF AROMATIC MONOCARBOXYLIC ACIDS UNDER CARBON DIOXIDE PRESSURE. [8 Oct 59] 10p.
Order from RIS $27.00 RIS rept. 96940

Trans. of German patent application H 28 232 (12o, 14) DAS 1 030 825, by Henkel & Cie G. m. b. H., Duesseldorf-Holthausen, filed 2 Oct 56, pub. 29 May 58.

A process is presented for producing aromatic dicarboxylic and polycarboxylic acids or their salts or derivatives by heating the alkali salts of aromatic monocarboxylic acids under pressure in the presence of carbon dioxide, which may be present in the bound form as well as in the presence of an acid binding medium, and if necessary in the presence of catalysts, whereby the resulting salts can be converted by conventional means into the free acids or their derivatives. The process is characterized in that the heating is carried out in the presence of alkali salts of cyanic acid or their polymers or derivatives. Salts of heterocyclic-aromatic monocarboxylic salts are used as the initial material.

Andrianov, K. and Gribanova, O.
ALKYL AND ASYL-SUBSTITUTED ORTHOESTERS OF SILICIC ACIDS. I. PREPARATION OF ORGANOMAGNESIUM COMPOUNDS WITHOUT ETHER IN THE PRESENCE OF TETRASILOXYSILICANE, tr. by R. Dresda. [1959] 8p. 11 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20729

Trans. of Zhur[nal] Obshch[ey] Khim[ii] (USSR) 1938, v. 8 [no. 6] p. 552-557.

Balandin, A. A., Bogdanova, O. K., and Shcheglova, A. P.
THE PRODUCTION OF ISOPRENE BY CATALYTIC DEHYDROGENATION OF ISOPENTENES. [1959] 6p. 8 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20792

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1958, v. 120, no. 2, p. 297-300.
Another translation is available from ATS $6.95 as ATS-41K27R [1958] 5p.

The amylenes for the experiments (mixture of isomers, boil. pt. 21-37°) were prepared by dehydration of isoamyl alcohol on aluminum oxide and purified by distillation in a column of 60 th. pl. The experiments were executed by the flowing method. The starting hydrocarbons were admitted from a cylinder. The rate of supply was regulated with a needle valve and checked with a rheometer. Before entering into furnace the isopentene vapors were saturated with steam in the needed proportion. The reaction products, exiting from the furnace, were led into a receiver with a reflux condenser, where the water vapors condensed and accumulated in a trap placed into a Dewar vessel and cooled by a mixture of acetone and CO_2. The evolving gas was received upon a saturated NaCl solution, in a gasometer. The gas volumes were reduced to NTP. The gathered gas was analyzed in a modified Orsat-Eger apparatus. The content in isoprene of the catalysate was determined with maleic anhydride. The sum of nonsaturated and of saturated hydrocarbons was determined in the gaseous phase, produced by vaporizing a sample of catalysate in a nitrogen stream into a cylindrical gasometer over a saturated NaCl solution. The concentration of hydrocarbons in the gas was kept below 15 or 16% to prevent their condensation. The influence of temperature, of supply rate, of dilution with steam on the yield of isoprene was investigated. The results of experiments about the influence of temperature (540 to 635°C) on the dehydrogenation at various rates of supply are tabulated. The best conditions for the dehydrogenation of isopentenes to the isoprene are: a 580° to 620° temperature, a supply rate of 5,000 to 8,000 cc/liter of catalyst per hour, and a dilution with steam in the ratio 1:2.3 or 3.3 (by weight). The process can be carried for a long time without regeneration of the catalyst. Besides the basic reaction of isopentenes dehydrogenation to isoprene with a yield of 28.8 to 28.2% of the supplied and 91.3 to 91.7% of the decomposed isopentenes, a demethanization reaction with formation of butylene and of butadiene (in sum: 1.6%), a hydrogenation of isopentenes to isopentane (0.4%) and a decomposition of isoprene with the formation of light gases and of carbon dioxide (0.3%) do occur. The CO_2 is formed by the interaction of carbon deposits on the catalyst with steam, according to the reaction: $C + H_2O = CO_2 + 2H_2$. The activation energy of the dehydrogenation reaction is 23.3 Kcal/mole.

Blaizot, P. and Mellier, M. T.
ESSENTIAL FATTY ACIDS, tr. by P. M. M. 14 June 57, 11p. 6 refs.
Order from SLA mi$2.40, ph$3.30 59-20610

Trans. of Oléagineux (France) 1957, v. 12 [no. 1] p. 1-6.

Danusso, Ferdinando, Morgalio, Giovanni, and Giannella, Vincenzo.
MOLECULAR WEIGHT AND AFFINITY OF INTERACTION WITH SOLVENTS OF FRACTIONS OF ATACTIC POLYPROPYLENE. [1959] 18p. 10 refs.
Order from SLA mi$2.40, ph$3.30 59-20891

Trans. of Accad[emia] Naz[ionale dei] Lincei. [Classe di Scienze Fiziche, Matematiche e Naturali]. Rend[iconti] (Italy) 1958 [ser. 8] v. 25 [no. 6] p. 498-508

Dull, H.
OZONE REACTIONS AND OZONIDES. PT. 1(CONTINUATION)-PT. 2. 27 Aug 54, 42p. 51 refs.
Order from SLA mi$3.30, ph$7.80 59-20766

Trans. of unidentified mono. (dissertation).

The course of the action of ozone on aldehydes was investigated by the quantitative determination of the acid and peracid formed. In the ozonization of aldehydes in solution oxygen participates in the oxidation. This depends on the aldehyde itself, on the aldehyde concentration, solvent, ozone concentration and the temperature. The course of ozonization of olefins in solution was determined quantitatively. In the ozonization of cyclohexene the activation of oxygen was similar to that observed with aldehydes. It always occurs when polmeric aldehydes are formed and depends chiefly on the solvent. The polymeric ozonide obtained in this way is a mixture of ozonide and moloxide. Oleic acid adds ozone in solution without activation of oxygen and with formation of a normal ozonide. A series of other ozonides react partly like cyclohexene or oleic acid. Accordingly, two types of ozonides may be differentiated, polymeric ozonides like cyclohexenes ozonide and normal ozonides such as the oleic acid ozonide. Identification of the ozonide was attempted by a quantitative determination of the active oxygen which is obtained by splitting with hydrogen iodide. Also for the purpose of identification, the reaction of the ozonides to catalytically activated hydrogen was tested as a micro-reaction. Rearrangements were observed frequently. The course of these rearrangement reactions was examined in cyclohexene and oleic acid ozonide. Two reactions were ascertained in oleic acid ozonide, one which yields aldehyde and acid and a second one in which ester formation takes place when CO is split off. Excess ozonization changes oleic acid ozonide considerably: conversion of the ozonide to peracids probably occurs. A study of cyclohexene moloxide by auto-oxidation of cyclohexene was carried out. Oxidative and reductive ozonide cleavages were conducted to determine the possible yield. For the preparation of acids from ozonides, splitting with alkaline permanganate or with hydroperoxide in alkaline solution proved to be a useful method. For the preparation of aldehydes catalytic hydrogenation was used successfully, which gave a good yield of the higher aldehydes of the fat series and dialdehyde, glutaric and adipinic dialdehyde. References are all prior to 1933.

Grün, Ad., Ulbrich, E[rnst], and Krczil, F[ranz].
CONTRIBUTIONS TO THE SYNTHESIS OF WAXES, tr. by P. M. M. 10p. 13 refs.
Order from SLA mi$1.80, ph$1.80 59-20721

Partial trans. (p. 421-423) of Angewandte Chemie (Germany) 1926, v. 39 [no. 13] p. 421-428.

Kirsanov, A. V. and Zhmurova, I. N.
CHLORIDES AND ESTERS OF URETHANPHOSPHORIC ACIDS, tr. by E. I. 9 Oct 57, 7p. 6 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20731

Partial trans. (p. 2642-2646) of *Zhur[nal] Obshch[ey] Khim[ii] (USSR) 1956, v. 26 [no. 9] p. 2642-2648.

Klarmann, B.
CHLOROSULFONIC ACID AS CHLORINATING AGENT [FOR ORGANIC COMPOUNDS]. [1959] 2p. 4 refs.
Order from SLA mi$1.80, ph$1.80 59-20852

Trans. of Seifen-Öle-Fette-Wachse (West Germany) 1952, v. 78 [no. 1] p. 18.

Kubelka, Paul and Wenzel, Wilhelm.
EQUILIBRIUM RELATIONS INVOLVED IN THE INTERACTION OF STEAM AND METHANE. [1959] 6p.
Order from SLA mi$1.80, ph$1.80 59-20678

Partial trans. (pts. 1 and 3) of [Chemisch-Metallurgische Zeitschrift]; die Metallbörse (Germany) 1931, v. 21 [no. 52, p. 1927-1928].

Natta, G., Pasquon, I., and Giachetti, E.
[KINETICS OF PROPYLENE POLYMERIZATION WITH HIGHLY STEREOSPECIFIC HETEROGENEOUS CATALYSTS]. PART III. CHAIN DEACTIVATION PROCESSES DEPENDENT ON THE CATALYST CONCENTRATION. [1959] 18p. 7 refs.
Order from SLA mi$2.40, ph$3.30 59-20711

Trans. of la Chim[ica] e [l']Ind[ustria] (Italy) 1958, v. 40, no. 2, p. 97-103.

Recent experiments for the production of isotactic polymers by means of coordinated anionic catalysts are reported. At constant pressures ($P_{C_3H_6}$ = 950mmHg) and temperatures (70°C), the molecular weight of the isotactic polypropylene obtained in the presence of catalysts prepared from titanium trichloride (violet modification) and from trialkyl aluminum, diminishes with the increase in the relative quantity of each of these compounds with respect to the solvent. The diminution in molecular weight is attributed to processes which shortstop the growing chain and are dependent on the concentration in solution of organo-metallic compounds and of complexes which contain titanium. Other chain rupture processes are revealed which are independent of such concentrations and have in general an outstanding effect with respect to those indicated above. All the processes for terminating the polymeric chain which we encountered proved kinetically to be equivalent to chain transfer reactions. In the field investigated, the molecular weights and the stereoisomeric composition of the polymers obtained are independent of the duration of polymerization. (See also 59-15512, 59-15513, 59-20710)

Natta, G., Pasquon, I. and others.
[KINETICS OF PROPYLENE POLYMERIZATION WITH HIGHLY STEREOSPECIFIC HETEROGENEOUS CATALYSTS]. PART IV. THE INFLUENCE OF TEMPERATURE AND PRESSURE ON THE KINETICS OF POLYMERIC CHAIN GROWTH AND TERMINATION PROCESSES. [1959] 21p. (1 table omitted) 10 refs.
Order from SLA mi$2.70, ph$4.80 59-20710

Trans. of la Chim[ica] e [l']Ind[ustria] (Italy) 1958, v. 40, no. 2, p. 103-111.

Prosecuting further the research referred to in Note III (or translation 59-20711) of this series, it was demonstrated that when propylene is polymerized in the presence of limited quantities of stereospecific catalyst, the prevailing chain termination process in a growing chain is a process of the first order with respect to the monomer concentration and is equivalent to a chain transfer reaction on one molecule of the same monomer. Operating with low partial pressures of propylene, we were able to demonstrate the existence of a chain deactivation process which is independent of the monomer concentration and the catalyst. The effect of this process on the diminution of molecular weights is very limited at below 80°C. Discussed are the individual mechanisms of the different identified processes of growth, transfer and termination (of four different types) of processes which are interesting for the overall polymerization process. (Author)

Natta, G. [Porri, L.] and others.
STEREOSPECIFIC POLYMERIZATION OF CONJUGATED DIOLEFINS. III. POLYMERIZATION OF BUTADIENE BY MEANS OF THE SYSTEM $AlEt_3$-$TiCl_4$. [1959] [17]p. 15 refs.
Order from SLA mi$2.40, ph$3.30 59-20934

Trans. of [la] Chimica e l'Industria (Italy) 1959, v. 41 [no. 5] p. 398-404.
Another translation is available from SLA mi$2.40, ph$3.30 as 59-17384 [1959] 14p.

Naudet, M., Micaelli, O., and Desnuelle, P.
SOME PRACTICAL ASPECTS OF THE INTERESTERIFICATION OF FATS, tr. by P. M. M. 6 Nov 57, 15p. (1 fig. omitted) 18 refs.
Order from SLA mi$2.40, ph$3.30 59-20607

Partial trans. (p. 57-58, 60-64) of Oléagineux (France) 1948, v. 3 [no. 2] p. 57-64.

Pasquon, I[talo].
THE CHARACTERISTICS OF THE POLYPROPYLENE OBTAINED WITH THE CATALYTIC SYSTEM VANADIUM OXYCHLORIDE-ALUMINUM TRIISOBUTYL. Note no. 3 on Coordinate Anionic Polymerization of Propylene to Atactic Polymers and to Stereoblock Polymers of High Molecular Weight. [1959] 15p. 10 refs.
Order from SLA mi$2.40, ph$3.30 59-20850

Trans. of [la] Chim[ica] e [l']Ind[ustria] (Italy) 1959, v. 41, no. 6, p. 534-539.

Pore, J.
METHANOLYSIS OF SOME SIMPLE GLYCERIDES OF HIGHER FATTY ACIDS. 11 June 52, 10p. 6 refs.
Order from SLA mi$1.80, ph$1.80 59-20609

Trans. of Oleagineax (France) 1952, v. 7 [no. 1] p. 21-24.

In accordance with former results obtained, it is confirmed that the speed of methanalysis of simple triglycerides is lower than that of mixed glycerides when the theoretical quantity of alcohol is used. For simple triglycerides with a fatty acid chain with the identical number of carbons, methanolysis is more rapid for the saturated chains (stearic) than for the unsaturated chains (oleic), the reaction limit of unsaturated chains is lower than that of saturated chains. In the case of saturated glycerides the speed of methanolysis is independent of the length of the chain of fatty acid components in the cases studied. (Author)

Presting, W. and Jänicke, S.
THE IDENTIFICATION OF POLYCYCLIC AROMATICS IN HYDROCARBON WAXES. [1959] 9p. (10 illus. 1 table omitted) 6 refs.
Order from SLA mi$1.80, ph$1.80 59-20437

Trans. of Fette Seifen Anstrichmittel (West Germany) 1958, v. 60 [no. 1] p. 12-16.

Ringsdorf, H. and Greber, G.
REVERSIBLY CROSS-LINKED AND BRANCHED MACROMOLECULAR COMPOUNDS. 3. PRODUCTION AND COPOLYMERIZATION OF DIVINYL SCHIFF BASES WITH STYRENE. [1959] [34]p. 47 refs.
Order from SLA mi$3.00, ph$6.30 59-20804

Trans. of Makrom[olekulare] Chem[ie] (Switzerland) 1959, v. 31, no. 1, p. 50-74.

Roskin, Ye. F.
SOME STATISTICAL DATA WHICH CHARACTERIZE THE LONG CHAIN MOLECULES OF POLYACRYLONITRILE IN SOLUTION. [1959] 12p. 19 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20834

Trans. of Zhurnal Fizicheskoy Khimii (USSR) 1955, v. 29 [no. 2] p. 244-249.

Certain data are calculated characterizing K, η, $\overline{r_n}$, $\overline{r_l}$, $\Delta\nu$ and others for chains of polyacrylonitrile distributed in dimethyl formamide medium.

Schaaf, Siegfried.
ANIONIC POLYMERIZATION OF LACTAMS. CONTRIBUTION TO THE MECHANISM OF RAPID CAPROLACTAM POLYMERIZATION. [1959] 20p. 20 refs.
Order from SLA mi$2.40, ph$3.30 59-20892

Trans. of Faserforsch[ung] u[nd] Textil[technik] (Germany) 1959, v. 10, no. 5, p. 224-231.

Shatenshteyn, A. I. and Izrailevich, Ye. A.
PREPARATION OF GLYCEROL AND OF AMIDES OF HIGH-MOLECULAR FAT ACIDS BY AMMONOLYSIS OF OILS AND FATS. 31 Oct 44, 9p. 28 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20733

Trans. of Zhur[nal] Prikladnoy Khimii (USSR) 1938, v. 11, no. 6, p. 967-974.

A reaction is found of the ammonolysis of oils (linseed oil, sunflower oil, cottonseed oil, olive oil, castor oil, "salomas") and of fats (lard, sheep fat, beef fat and cod liver oil). It was found, that a reaction takes place quantitatively with the formation of glycerin and a mixture of amides of higher fatty acids. The velocity of the reaction depends on the chemical content of the oils and fats. The velocity of reaction is increased with increased temperature, addition of a catalyst (NH_4Cl) and emulsifier. At 100° the reaction proceeds faster with gaseous ammonia (at 60 amp.), than with liquid ammonia. Several physical constants (density, temperature of "drop falling") and chemical constants (iodine number, nitrogen content) of obtained amides mixtures are found. The tests for the recovery of amides by rough processing show, that their technical manufacture is easily accomplishable. (Author)

Stiepel, C.
STEARIN PITCHES, FAT PITCHES AND FAT TARS. [1959] 7p. 4 refs.
Order SLA mi$1.80, ph$1.80 59-20623

Trans. of [Seifen-Ole-Fette-Wachse] (Germany) 1935, v. 62 [no. 9] p. 161-163 and [no. 10] p. 195-196.

Svanberg, O[lof].
QUANTITATIVE DETERMINATION OF MONOSACCHARIDES IN THE PRESENCE OF MILK SUGAR. 10 Dec 51, 10p. 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20758

Trans. of [Hoppe-Seyler's] Z[ei]tschr[ift] f[ür] Phys[iologische] Chem[ie] (Germany) 1930, v. 188, p. 219-224.

Taradoire, M. F.
THE RAPID OXIDATION OF THE DRYING OILS AND THE ANTIOXIDANTS (L'Oxydation Rapide des Huiles Siccatives et les Antioxygenes) tr. by Hans Berger. 3 Nov 50, 2p. 3 refs.
Order from SLA mi$1.80, ph$1.80 59-20061

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1926, v. 183, p. 507-508.

Vilim, Rostislav.
PRESSURELESS COPOLYMERIZATION OF ETHYLENE WITH PROPYLENE. [1959] 8p. 5 refs.
Order from SLA mi$1.80, ph$1.80 59-20802

Trans. of Chemicky Prumysl (Czechoslovakia) 1959, v. 9, no. 2, p. 101-104.

Physical Chemistry

*KOLLOIDNYY ZHURNAL (USSR) 1959, VOL. 21, NO. 3, P. 249-375 (Colloid Journal). [1959] 1v. SOV-69-21-3-(1-25)/25.
Order from OTS $0.60, $3.50/year PB 141 064T-8
Foreign $0.85, $5.00/year

Consists of abstracts in English.

Audouin, A. and Levasseur, G.
EXPERIMENTS ON EMULSIFICATION OF VEGETABLE OILS BY ULTRASONIC WAVES. 5 Apr 51, 22p. (3 figs. omitted) 1 ref.
Order from SLA mi$2.70, ph$4.80 59-20608

Trans. of Oléagineux (France) 1949, v. 4 [no. 2] p. 95-100.

Geffcken, W.
A [NEW] METHOD FOR DETERMINING THE REFRACTIVE INDEX OF SOLUTIONS [BY] THE INTERFEROMETER PRINCIPLE, tr. by P. M. M. 27 May 54, 11p. 10 refs.
Order from SLA mi$2.40, ph$3.30 59-20848

Trans. of Ze[itschrift] f[ür] Elektrochem[ie] (Germany) 1931, v. 37 [no. 5] p. 233-237.

Gol'danskiy, V. I. and Elovich, S. Yu.
CATALYTIC HYDROGENATION OF ORGANIC COMPOUNDS IN THE LIQUID PHASE. II. KINETICS OF THE HYDROGENATION OF OLEIC ACID. [1959] 1p.
Order from LC or SLA mi$1.80, ph$1.80 59-20896

Partial trans. (p. 1092-1093) of Zhurnal Fizicheskoy Khimii (USSR) 1946, v. 20 [p. 1085-]1093.

Karpen, N. Vasilesco.
THE CONCEPT OF ACTIVITY IN PHYSICAL CHEMISTRY, tr. by M. G. M. 20 Mar 50, 3p.
Order from SLA mi$1.80, ph$1.80 59-20560

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) [1949] v. 228 [no. 14] p. 1220-1222.

Kiselev, A. V., ed.
SURFACE CHEMICAL COMPOUNDS AND THEIR ROLE IN ADSORPTION PHENOMENA. Collected Works of the Conference on Adsorption. Sep 59, 403p. 484 refs.
Order from OTS $4.00 AEC-tr-3750

Trans. of mono. Poverkhnostnyye Khimicheskiye Soyedineniya i ikh Rol' v Yavleniyakh Adsorbtsii, Moscow, 1957.

Kroll, W.
SUBLIMED IRON. 25 Jan 55, 5p. (5 figs. omitted) 4 refs.
Order from SLA mi$1.80, ph$1.80 59-20937

Trans. of Z[eitschrift für] Elektrochemie (Germany) 1934, v. 40 [no. 6] p. 303-306.

Kruis, A. and Geffcken, W.
REFRACTOMETRIC INVESTIGATIONS. XXXVI. A ROTARY CHAMBER FOR THE INTERFEROMETRIC DETERMINATION OF THE REFRACTIVE INDICES OF SOLUTIONS. [1959] [10]p. 6 refs.
Order from SLA mi$1.80, ph$1.80 59-20830

Trans. of Z[eitschrift für] Physik[alische] Chem[ie] [Leipzig] (Germany) 1933, v. 166A [no. 1] p. 16-22.

Kursanov, D. N. and Parnes, Z. N.
REACTION OF HYDROGEN EXCHANGE IN CYCLOPENTADIENE (O Reaktsii Vodorodnogo Obmena Tsiklopentadiyena). Dec 57 [6]p. 8 refs.
C. T. S. no. 406.
Order from LC or SLA mi$1.80, ph$1.80 59-18531

Trans. of Akademiya Nauk SSSR. Doklady, 1956, v. 109, no. 2, p. 315-318.

The mobility of the hydrogen atoms in cyclopentadiene was investigated by making use of the reaction of hydrogen exchange with deuterium oxide in the presence of an alkali catalyst -N, N' - dimethylpyridommine. All six hydrogen atoms in cyclopentadiene entered into the reaction of hydrogen exchange with deuterium oxide in dioxan solution which was carried out under extremely mild conditions. The individual properties of the hydrogens of the methylene group do not manifest themselves in the reaction of hydrogen exchange. The exchange equilibrium is reached approximately after 20 hours at 20°, i. e., under such conditions that even the hydrogen atoms attached to the carbon group, for instance in aldehydes and ketones, do not enter practically in the reaction of hydrogen exchange. Silvane does not enter into the reaction of hydrogen exchange even when it is carried out under more severe conditions (10 hours at 50° + 20 hours at 20°) and pyrrole exchanges only one hydrogen átom that attached to nitrogen. Data concerning the exchange capacity of pyrrole correspond entirely with the results obtained by the Japanese investigators Koizumi and Titani.

Manegold, Erich and Kalauch, Karl.
CAPILLARY SYSTEMS. XXII. 3. DISTURBANCES OF NEUTRALITY AT MEMBRANES TRAVERSED BY AN ELECTRIC CURRENT. 12 May 52, 71p. (1 fig. omitted) 12 refs.
Order from SLA mi$4.50, ph$12.30 59-20615

Trans. of Kolloid-Z[eitschrift] (Germany) 1939, v. 86 [no. 3] p. 313-339.

Masing, G.
PROBLEMS OF INDUSTRIAL ELECTROCHEMISTRY. [1959] 4p. (3 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20828

Partial trans. (p. 327-330) of Z[ei]ts[chrift] f[ür] Elektrochemie (Germany) [1936] v. 42 [no. 6] p. 319-330.

Moreau, J[ean] and Bardolle, J[ean].
AN ELECTRON DIFFRACTION STUDY OF OXIDE FILMS FORMED ON AN IRON SURFACE.
28 Apr 55, 3p. 13 refs.
Order from SLA mi$1.80, ph$1.80 59-20929

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1955, v. 240 [no. 5] p. 524-526.

Muller-Hillebrand, Dietrich.
SURFACE CONTACTS UNDER HIGH PRESSURE, tr. by F. Hudswell. 1955 [29]p. 8 refs. A. E. R. E. Lib/Trans. 577.
Order from SLA mi$2.70, ph$4.80 59-17442

Trans. of Wissenschaftliche Veröffertlichungen [aus den] Siemens-Werk[en] (Germany) 1941, v. 20, p. 85-103.

The surfaces of bars with a rectangular cross section were freed from oxides and roughened by brushing them with a steel brush. The bars consisted of various kinds of carbon, Cu, Al, Mg, Zn, Ag, and Sn. After being cleaned they were placed in air for a definite time then one was laid at right angles across another. The area of overlap was subjected to a relatively high pressure and the contact resistance was determined from measurements of current and voltage. The contact resistances of Cu, Al, and Mg increased sharply after storage in a drying oven at 125°, while Ag, Zn, and Sn did not show any appreciable change providing no moisture interfered in the formation of the oxide layers.

Neuhaus, A. and Retting, W.
ON THE CONDENSATION AND EVAPORATION OF ZINC SULPHIDE AND CADMIUM SULPHIDE IN A HIGH VACUUM. [1959] 27p. 18 refs.
Order from SLA mi$2.70, ph$4.80 59-20373

Trans. of [Zeitschrift für Elektrochemie] (West Germany) 1958, v. 62, no. 1, p. 33-40.

For the reproducible production of evaporated films of given thickness, composition, grain size and grain quality, an attempt is made to use the molecular theories and concepts of the growth of a single crystal on polycrystaline evaporated films, for the evaporation onto foreign type surfaces and for the refinement by sublimation of thermally dissociating materials. For this purpose there is reported for a number of measurements the vapor pressure and condensation coefficient of NaCl, KCl, ZnCl, and CdS, and an exhaustive analysis of the evaporation and condensation processes is carried out. The measurements were carried out with a sensitive balance (revolving coil measurement system) in a high vacuum, upon whose pan an evaporation was made from an (molecular-stream) oven. To

unquestionably test the experimental arrangement the vapor pressure of NaCl and KCl was measured. The results were in perfect agreement with the results of other authors. In contrast to this however the measurements of the vapor pressure of ZnS and CdS differed greatly from the values which are to be found in the literature. However there exists only one prior determination of these vapor pressures. (Author)

Plaksin, I. N., Besonov, S. B., and Tyurnikova, V. I.
ÉTUDE DU MÉCANISME DE LA RÉACTION ENTRE LES XANTHOGENATES ET LA SURFACE DES MINERAIS SULFURÉS [Study of the Reaction Mechanism between the Xanthogenates and the surface of Sulfated Ores] tr. by Simon. 22 Feb 58 [7]p. 2 refs. Trans. no. R 239 (text in French).
Order from LC or SLA mi$1.80, ph$1.80
CEA-tr-R239

Trans. in French of Akad[emiya] Nauk SSSR. Dokl[ady] 1955, v. 102, no. 2, p. 331-333.

Results are presented of the separation by flotation of a mixture of chalcopyrite and quartz, using tagged xanthogenates and argon.

Pleskov, Yu. V.
THE FORMATION OF DIVALENT AND TRIVALENT SILVER IN ALKALINE SOLUTIONS AT ROTATING DISC ELECTRODES (Obrazovaniye Dvukh- i Trekhvalentnovo Serebra v Shchelochnykh Rastvorakh na Vrashchayushchemsya Diskovom Elektrode) tr. by J. H. Dixon. Sep 58 [8]p. 11 refs. Library Trans. no. 769; M. 129.
Order from LC or SLA mi$1.80, ph$1.80 59-18740

Trans. of Akademiya Nauk SSSR. Doklady, 1957, v. 117, no. 4, p. 645-647.

It was found that ions of univalent silver form a trinuclear uninegative complex in concentrated KOH expressed by $[Ag_3O(OH)_2]^-$. The anode oxidation and reduction of alkaline solutions of Ag_2O were investigated. The anode polarization curves taken using rotating gold disc electrodes are given and discussed and the stages corresponding to surges on the curves are evaluated. It is proved, using a new method, which is described, for separating the diffusion and non-diffusion currents, that silver is oxidized to Ag_2O_2 and at high potentials to trivalent silver, the process being fast. The trivalent silver is unstable. Ag^{II} ions are shown to be unstable, but in spite of this the oxidizing-reducing processes at a silver electrode may occur in solution as well as in the solid state. (Author)

Raoult, G., Kergomard, A., and Bon, R.
PERMITTIVITY OF SOME COMPOUND AMIDES FROM 100 TO 900 MEGACYCLES. [1959] [4]p.
Order from SLA mi$1.80, ph$1.80 59-20685

Trans. of Arch[ives] des Sciences (Switzerland) 1957, spec. v. 10, p. 62.

The open coaxial line, which gives the number of standing waves, hence the admittance of the measurement cell, and the G. R. admittance-meter, which yields the admittance of the cell following the principle of the Wheatstone bridge, were used. The cell was a piece of coaxial line of 50 ohms characteristic resistance, short-circuited at the end, whose length is covered by a thin mica. From the admittance, with the aid of the curves tank z/z drawn by the laboratories of Rennes and Lille, the values of the real and imaginary parts of the relative permittivity were found. For the di-substituted amide, there was a single absorption band near 420 Mc, i.e., 71.5 cm; the dielectric constant varied little, in the neighborhood of 35. For the mono-substituted amide, there were 2 absorption bands near 310 and 460 Mc, i.e., 97 and 65 cm; the variations of the real part were very great. For the formamide, 2 bands were present, but one other may appear beyond 900 Mc. The real part varies less. Results indicate that the absence of hydrogen bound to the nitrogen atom leads to a body much simpler, from the electrical point of view. By contrast, a bound hydrogen atom, for different radicals, seems to give 2 absorption bands and an extremely significant variation of the real part (from 100 to 15). The presence of 2 hydrogen atoms always gives 2 bands, separated, but the real part remains much more constant.

Urazovskiy, S. S. and Chetsyev, P. M.
A NEW EFFECT IN THE TEMPERATURE DEPENDENCE OF SURFACE TENSION. 12 June 50, 17p. (2 figs. omitted) 4 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20725

Trans. of Zhur[nal] Fiz[icheskoy] Khim[ii] (USSR) 1949, v. 23 [no. 12] p. 1421-1425.

The effect consists in the existence of horizontal breaks on the $\gamma(t)$-curve with breaking points corresponding to the melting temperatures of monotropic-polymorphous modifications. The effect is interpreted in the light of the contemporary theory about the liquid state and about the theory of molecular polymorphism.

Vinogradov, A. P., Kutyurin, V. M. and others.
ISOTOPIC COMPOSITION OF PHOTOSYNTHETIC OXYGEN. [1959] [4]p. 9 refs.
Order from LC or SLA mi$1.80, ph$1.80
59-20552

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1959, v. 125 [no. 5] p. 1151-1153.

Determinations were made of the precise isotopic composition of the oxygen of fresh water photosynthesis (experiments with Elodea canadensis) and of marine phytoplankton (diatomic algae for the most part).

Wagner, Carl.
PHYSICAL-CHEMICAL PRINCIPLES UNDERLYING DECARBURIZATION AND SCALING OF IRON AND STEEL. [1959] 14p. (5 figs. omitted) 55 refs.
Order from SLA mi$2.40, ph$3.30 59-20423

Trans. of Archiv f[ür] d[as] Eisenhüttenwesen (Germany) 1938, v. 11 [no. 9] p. 449-454.

The decarburization of iron by CO-CO_2 gas mixture is dependent upon the sum of the partial pressures ($PCO + PCO_2$), the ratio of the partial pressures of CO to CO_2, and upon the temperature. In order safely to avoid oxidation the ratio PCO_2/PCO had best be kept under 0.3. Assuming that the diffusion of the carbon in the iron is the slowest partial process of the carburization, formulae for the computation of the time course of the reaction are set up. In the case of very thin sheet, the chemical reaction at the phase boundary metal/gas determines the time. The individual steps of this process are given according to the reaction-kinetic analysis of E. Doehlmann. If it is assumed that the oxidation of metals is due to the migration of ions and electrons, not only the formation speed of the oxide phase can be computed numerically but in addition, insight is gained into the individual processes such as the oxidation of iron to FeO. When the diffusion within the solid oxide layer is the slowest and therefore the time-determining process, a very simple time-law of Tammann applies to the case. This does not always apply, however, since other processes may enter in namely, the extent and stability of the scale layer. (Author)

Wulff, P. and Kordatzki W.
THE RECORDING MEASUREMENT OF HYDROGEN AND OTHER ION-CONCENTRATIONS WITH A NEW UNIVERSAL TUBE INSTRUMENT (CONTINUATION). [1959] 11p. (6 figs. omitted) 8 refs.
Order from SLA mi$2.40, ph$3.30 59-20534

Trans. of [Chemische Technik] (Germany) 1930 [v. 3] no. 36, p. 342-345 and no. 37, p. 353-355.

Zaozerskiy, I. N. and Andreyeva, Z. F.
SEPARATION OF THE RARE-EARTH ELEMENTS (LANTHANONS) BY MODERN METHODS (Sovremennyye Metody Razdeleniya Redkikh Zemel'). Dec 57 [10]p. 26 refs. C.T.S. no. 392.
Order from LC or SLA mi$1.80, ph$1.80 59-18530

Trans. of Khimicheskaya Nauka i Promyshlennost' (USSR) 1956, v. 1, no. 5, p. 512-517.

Topics considered include (1) uses of the rare-earths, (2) properties of the rare-earths, (3) separation of the cerium earths, and (4) separation of the yttrium earths.

Zharkov, V. N.
COMMENT ON THE MECHANISM OF THE PHOTOGRAPHIC PROCESS. [1959] 3p. 7 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20837

Trans. of Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinematografii (USSR) 1958, v. 3, no. 5, p. 379-380.

Substantial reasons exist for assuming that in real grains interstitial $Ag_{\dot{o}}$ in equilibrium are practically absent while on the other hand, a considerable number of $Ag_{\square}$ vacancies of the order of 10^2-10^4 exist in the grain. At least three important conclusions can be drawn from this fundamental condition: (1) $Ag_{\dot{o}}$ can not play any substantial role in the development center formation process; (2) $Ag_{\dot{o}}$ can not play any important role in the development or photolytic decomposition process of AgBr (AgCl), except if during these processes $Ag'_{\square}$, which has an impurity nature, is suppressed and the whole equilibrium $Ag'_{\square} + Ag_{\dot{o}} \leftrightharpoons Ag^{+}$ (in the lattice) is not displaced towards the condition where the concentration of $Ag_{\dot{o}}$ is increased; and (3) The interstitial silver ions formed in the exposure process or by some other method are annihilated with $Ag'_{\square}$ according to $Ag_{\dot{o}} + Ag'_{\square} \rightarrow Ag^{+}$ (in the lattice). The lifetime of such $Ag_{\dot{o}}$ ions is determined by their mean path equal to the mean distance between $Ag_{\square}$. The formation of development centers and spontaneous development is assumed to depend more substantially upon the movement of $Br \cdot_{\square}$ (having an impurity nature) and $Ag'_{\square}$ vacancies than has been assumed up to now. It is also possible that a mechanism suggested by Zharkov (Zhur. Nauch. i Priklad. Fot. i Kinematografii 3: 225, 1958, a translation of which is available as 59-15702) takes place or, perhaps, when AgBr and AgCl decompose, the growth of the new phase has a dislocation character, for example, of the type examined by Bardeen and Herring (Imperfections in nearly perfect crystals, John Wiley & Sons, N.Y., 1952).

EARTH SCIENCES

*AKADEMIYA NAUK SSSR. IZVESTIYA. SERIYA GEOFIZICHESKAYA, 1959, NO. 4, P. 505-640 (News of the Academy of Sciences of the USSR. Geophysics Series). [1959] 1v. SOV-49-59-4-(1-20)/20.
Order from OTS $0.80, $4.50/6 mo. PB 141 042T-13
Foreign $1.05, $6.00/6 mo.

Consists of abstracts in English.

Shuleykin, V. V.
PHYSICS OF THE SEA, tr. by A. Pingell. Table of contents. 16 July 59 [10]p. N R L Trans. no. 742.
Order from OTS $0.50 59-21106

Trans. of table of contents of mono. Fizika Moria, 3d ed., Moscow, 1953.

Climatology and Meteorology

Yudin, M. I.
THE DEVELOPMENT OF NUMERICAL SHORT-RANGE FORECASTING ON THE BASIS OF PHYSICS. 22 Jan 59, 3p. JPRS: L-503-N.
Order from OTS $0.50 59-13075

Trans. of unidentified mono.

Goptarev, N. P.
ON CERTAIN CHARACTERISTICS OF WIND GUSTINESS (O Nekotorykh Kharakteristikakh Poryvistosti Vetra). [1959] [15]p. 3 refs. F-TS-9872/V.
Order from LC or SLA mi$2.40, ph$3.30 59-19503

Trans. of Meteorologiya i Gidrologiya (USSR) 1957, no. 5, p. 45-49.

A previous article by V. S. Bol'shakov (issue no. 3, 1955) is criticized.

Laykhtman, D. L.
LAWS GOVERNING PHYSICAL PROCESSES IN THE BOUNDARY LAYER OF THE ARCTIC (Zakonomernosti Fizicheskikh Protsessov Pogranichnogo Sloya Atmosfery v Artike) tr. by George S. Mitchell and Irene A. Donehoo. July 59 [25]p.
Order from LC or SLA mi$2.70, ph$4.80 59-18845

Trans. of mono. Sovremennye Problemy Meteorologii Prizemnogo Sloya Vozdukha, Leningrad, 1958, p. 26-42.

Trenkle, H.
THE ZONAL WIND COMPONENT IN THE ATLANTIC-EUROPENA SECTOR AS A FUNCTION OF BRIEF FLUCTUATIONS OF THE SOLAR ACTIVITY. II. EXPANDED STUDY (Die zonale Windkomponente im Atlantisch-Europäischen Sektor in Abhängigkeit von kurzperiodischen Schwankungen der Sonnenaktivität. II. Erweiterte Untersuchung) tr. by Marcel I. Weinreich. 3 Mar 59, 7 refs.
Order from LC or SLA mi$2.40, ph$3.30 SCL-T-229

Trans. of Meteorologische Rundschau (West Germany) 1957, v. 10, no. 6, p. 177-179.

In a previous study we proved statistically the relationships between brief fluctuations of the solar activity (relative numbers of sun-spots) and corresponding fluctuations of the zonal component of the geostrophic wind (Ug_{120}) between 50° and 60°N in the Atlantic-European sector (60°W - 60°E) in the 500-mb area. Considering the circulation form on the check-spot day (low or high index), we showed that solar impacts in a low index bring about excessive increases of Ug_{120} up to the 7th consecutive day, and that, in a high index, they effect a corresponding decrease of Ug_{120} up to the 21st consecutive day. (Extremization of the normal circulation course). In the present study, the above findings are verified and confirmed on the basis of a more comprehensive observation material and under improved research conditions. (Author)

Geodesy

IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY. GEODEZIYA I AEROFOTOS"YEMKA (USSR) 1959, NO. 2, P. 3-157 (News of Institutes of Higher Learning, Geodesy and Aerial Photography). [1959] 1v. SOV-154-59-2-(1-22)/22.
Order from OTS $0.70, $4.00/year PB 141 007T-8
Foreign $0.95, $5.50/year

Consists of abstracts in English.

Buryak, I.
AUTOMATIC TACHEOMETER (Takheometr-Avtomat). Rept. no. 36 on Special Geodetic Assignment. 6 Jan 59, 6p. SIR 2994.
Order from LC or SLA mi$1.80, ph$1.80 60-13025

Trans. of Geodezist (USSR) 1937 [v. 13] no. 3, p. 42-45.

This device, developed by the Central Scientific Research Institute of Geodesy, Aerial Surveying and Cartography, has the form of an auxiliary automatic angled eyepiece which can be inserted into the tube of any theodolite or telescopic alidade.

Geology

*AKADEMIYA NAUK SSSR. IZVESTIYA. SERIYA GEOLOGICHESKAYA, 1959 [V. 24] (News of the Academy of Sciences of the USSR. Geology Series). [1959]
Order from OTS $0.50, $3.00/6 mo.
Foreign $0.75, $4.50/6 mo.

No. 7, p. 3-128, PB 141 005T-18
No. 8, P. 3-127, PB 141 005T-17

Consists of abstracts in English.

Alekseyev, V. V., Grammakov, A. G. and others.
RADIOMETRIC METHODS IN THE PROSPECTING AND EXPLORATION OF URANIUM ORES. BOOK 1. July 59, 337p.
Order from OTS $6.00/2 books AEC-tr-3738

Trans. of mono. Radiometricheskiye Metody Povskov i Razvedki Uranovykh Rud, Moscow, 1957, chap. 1-9.

This book is intended for geophysical engineers and geologists, and for students in mining and geological schools. General principles of radiometric prospecting are discussed in part one. Part 2 describes the fundamental methods of measurements, the principles of the layout of radiometric apparatus, the rudiments of radiometric data processing, and methods of laboratory radioactivity measurements. For abstract of parts 3 and 4, see entry 59-21131-2 below.

Alekseyev, V. V., Grammakov, A. G. and others.
RADIOMETRIC METHODS IN THE PROSPECTING AND EXPLORATION OF URANIUM ORES. Book 2. July 59, 1v. 171 refs.
Order from OTS $6.00/2 books AEC-tr-3738

Trans. of mono. Radiometricheskiye Metody Poyskov i Razvedki Uranovykh Rud, Moscow, 1957, chap. 10-16.

Continuation of 59-21131-1 above. Part 3 provides an account of radiometric prospecting methods and practices used primarily in the exploration and exploitation of ore deposits. Part 4 deals with problems of the application of complex geophysical methods in various situations and at various stages of prospecting operations involving radioactive ores.

Ustinova, O. A.
CONDITIONS FOR THE INDUSTRIAL DEVELOPMENT OF BAUXITE ORE VARIETIES OF THE BOKSON ORE DEPOSITS. PT. I-II. [1959] 11p.
Order from LC or SLA mi$2.40, ph$3.30 59-14288

Trans. of Akademiya Nauk SSSR. Vostochno-Sibirskiy Filial [Irkutsk]. Trudy. [Seriya Geologicheskaya] 1958, no. 1(12) p. 65-70.

ENGINEERING

RAZVEDKA I OKHRANA NEDR (USSR), 1959, [VOL. 25] (Exploration and Conservation of Natural Resources). [1959]
Order from OTS $0.50, $3.00/6 mo.
Foreign $0.75, $4.50/6 mo.

No. 6, p. 1-64, PB 141 135T-16
No. 7, p. 1-64, PB 141 135T-17

Consists of abstracts in English.

Tuganov, A. G.
STANDARD DESIGNS FOR FILTER STATIONS WITH A THROUGHPUT 1,000, 3,000 AND 9,000 m^3 WATER PER DAY. [1959] [12]p. (4 figs. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-18758

Trans. of Vodosnabzheniye i Sanitarnaya Tekhnika (USSR) 1958, no. 1, p. 1-5.

Aeronautical Engineering

[CIVIL AVIATION]: SELECTED ARTICLES. [1959] [50]p. (6 figs. 3 photos omitted) F-TS-9753/III.
Order from LC or SLA mi$3.30, ph$7.80 59-19514

Trans. of Grazhdanskaya Aviatsiya (USSR) 1958 [v. 15] no. 5, p. 2-5, 16-17 and 22-25.

Contents:
Certain problems of maintenance and repair of aviation equipment, by L. Malyuga
Time schedules for the servicing and repair of aircraft
Leading operational and maintenance divisions and technological designing bureaus
Merger of aircraft line maintenance workshops and maintenance depots
The so-called progressive method of aircraft repair
Our experience in accident-free operations, by N. Garniyer
In search of new methods, by N. Kamenev

[CIVIL AVIATION]: SELECTED ARTICLES. [1959] [91]p. F-TS-9760/V.
Order from LC or SLA mi$5.40, ph$15.30 59-19516

Trans. of Grazhdanskaya Aviatsiya (USSR) 1958 [v. 15] no. 1, p. 5-11, 19-24, 30, and 32-37.

Contents:
In accordance with the new order, by V. Turkeslanskiy
On the threshold of 1958
Polar aviation, by M. Shevelev
At the southern extremity of the earth, by P. Moskalenko and T. Paliyevskiy
Winter exploitation of Soviet civil aviation equipment, by V. Samborskiy
For the convenience of air travelers, by G. Piskov
On color film, by N. Golovin
Most efficient utilization of productive capacity of aircraft repair shops, by Ye. Mikhordyk
Team method of aircraft servicing, by N. Ivanov

OBSERVATIONS ON AIRCRAFT-INSPECTION PRACTICE IN THE SOVIET AIR FORCE. 14 Sep 59 [10]p. 41 refs. AF 1256085.
Order from LC or SLA mi$1.80, ph$1.80 59-19699

Trans. from various 1958 and 1959 issues of Vestnik Vozdushnogo Flota (USSR) and Sovetskaya Aviatsiya (USSR)

AN OUTSTANDING HIGH SPEED FLIGHT (Vydayushchiysya Skorostnoy Perelet). 4 Sep 59 [3]p. AF 1256064.
Order from LC or SLA mi$1.80, ph$1.80 59-19700

Trans. from Pravda [Moscow] (USSR) 1959, no. 232, p. 4.

In their high speed flight with a 15 ton load over the distance of 2000 km the crew headed by V. K. Kokkinaki were the first to achieve the world record--719.496 km per hour. At the same time they bettered the former world records of flight speed over a similar distance with a load of one, two, five and ten tons. Thus, during yesterday's (Aug 19, 1959) flight the Soviet flyers established five new world records! (Extracted from the report)

PECULIARITIES OF PILOTING "TRENER-226" AIRCRAFT (Osobennosti Pilotirovaniya Samoleta "Trener-226"). 15 Sep 59 [5]p. (12 figs. omitted) AF 1256092.
Order fromLC or SLA mi$1.80, ph$1.80 59-19696

Summary trans. of [Kryl'ya Rodiny] (USSR) 1959, no. 7, p. 10-12.

Argunov, I. V. and Yemel'yanenko, A. K.
ENGINEERING EFFICIENCY OF AIRCRAFT STRUCTURES (K voprosu o Tekhnologichnosti Konstruktsii Samoleta). 16 Sep 59 [22]p. AF 1256091.
Order from LC or SLA mi$2.70, ph$4.80 59-19697

Trans. of Aviatsionnaya Promyshlennost' (USSR) 1958, no. 3, p. 19-26.

Arson, L. D.
WEIGHT ENGINEERING AND WEIGHT CONTROL OF AERONAUTICAL STRUCTURES (Kul'tura vesa i Vesovoy Kontrol' Aviatsionnykh Konstruktsiy). 17 Sep 59 [5]p. AF 1256102.
Order from LC or SLA mi$1.80, ph$1.80 59-19692

Trans. of Aviatsionnaya Promyshlennost' (USSR), 1958, no. 4, p. 25-26.

Chumakov, V. P., Braslavskiy, D. A. and others.
MODERN PROBLEMS IN THE TECHNOLOGY OF ASSEMBLY IN INSTRUMENT MAKING (Sovremennyye Voprosy Tekhnologii Sborki v Priborostroyenii). [1959] [141]p. F-TS-9236/V.
Order from LC or SLA mi$7.20, ph$22.80 59-18109

Trans. of Aviatsionnyy Tekhnologicheskii Institut, Moscow. Trudy (USSR) 1956, v. 27.

This volume comprises a collection of reports presented at a conference organized in 1954 by the chair of technology of aircraft instrument making of the Moscow Aviation Technology Institute. Topics include problems of accuracy of technological processes in the winding of electric subassemblies, accuracy and physical interchangeability of pickup elements, gyroscopes in a gimbal suspension, general classification of winding machines, winding of small-sized rotors with coils spread in the slot, and machines for winding rotors and stators with internal slots.

Nikolayev, D.
PROPELLER FOR THE AIRPLANE AN-2 (Vozdushniy Vint dlya Samoleta AN-2). [1959] [6]p. MCL-2/V.
Order from LC or SLA mi$1.80, ph$1.80 59-19517

Trans. of Grazhdanskaya Aviatsiya (USSR) 1958 [v. 15] no. 10, p. 24.

Podzey, A. V., Sulima, A. M. and others.
TECHNOLOGY OF AIRCRAFT ENGINE CONSTRUCTION. CHAP. I-VI. [1959] [221]p. F-TS-9393/V.
Order from LC or SLA mi$9.90, ph$34.80 59-19777

Trans. of mono. Tekhnologiya Aviadvigatelestroyeniya, Moscow, 1957, chap. 1-6.

Textbook, intended for use in courses on aircraft engine production engineering. Topics include design features, the technical specifications for manufacture and materials, the scheduling of manufacturing processes, and the major manufacturing operations as well as methods of inspection. (See also 59-19778)

Podzey, A. V., Sulima, A. M. and others.
TECHNOLOGY OF AIRCRAFT ENGINE CONSTRUCTION. CHAP VII-XII. [1959] [291]p. 42 refs. F-TS-9393/V.
Order from LC or SLA mi$11.10, ph$45.60 59-19778

Trans. of mono. Tekhnologiya Aviadvigatelestroyeniya, Moscow, 1957, chap. 7-12.

For abstract see 59-19777 above.

Romanyuk, V. and Savin, A.
PARACHUTE JUMP FROM STRATOSPHERE: GROUP PARACHUTE JUMPS WITH FREE FALL FROM STRATOSPHERE (Gruppovyye Zatyazhnyye Pryzhki iz Stratosfery). 24 Sep 59 [6]p. (2 figs. omitted) AF 1256114.
Order from LC or SLA mi$1.80, ph$1.80 59-19689

Summary trans. of Kryl'ya Rodiny (USSR) 1958, no. 6, p. 17-19.

The training and experiences of the authors are described in making their record-breaking 1957 jumps from the stratosphere. On the morning of 20 August 1957, N. Nikitin jumped from a 15,383-meter altitude and fell 14,620 meters before opening his parachute. The next day a 6-man team made a 14,811-meter jump. The group fell for 14,045 meters before opening their parachutes: the free fall took about 4 minutes.

Sheynin, M.
THE LIGHTING MARKER OF A LANDING STRIP (Svetovoye Oboznacheniye Vzletno-Po Posadochnoy Polosy). [1959] [3]p. MCL-44/III.
Order from LC or SLA mi$1.80, ph$1.80 59-19479

Trans. from Sovetskaya Aviatsiya (USSR) 1959, no. 37 (3207), p. 2.

Tendler, V. M.
CRITERIA FOR THE ENGINEERING EFFICIENCY OF AN AIRCRAFT STRUCTURE (O Kriteriyakh Tekhnologichnosti Konstruktsii). 16 Sep 59 [5]p. 3 refs. AF 1256100.
Order from LC or SLA mi$1.80, ph$1.80 59-19693

Trans. of Aviatsionnaya Promyshlennost' (USSR), 1958, no. 3, p. 26-27.

Thachenko, A.
A MOVABLE DEVICE FOR CHECKING NOZZLES (Perenosnyy Stend dlya Proverki Forsunok). 17 July 59 [4]p. AF 1255945.
Order from LC or SLA mi$1.80, ph$1.80 59-19722

Summary trans. from Sovetskaya Aviatsiya (USSR) 1959, 11 June, p. 2.

Tkachev, L. I.
THE SENSITIVE ELEMENT OF PRECISION GYROSCOPIC INSTRUMENTS FOR SPACE ORIENTATION OF FLYING APPARATUS (Chuvstvitel'nyy Element Pretsizionnykh Giroskopicheskikh Priborov dlya Prostranstvennoy Orientirovki Letatel'nykh Apparatov). [1959] [5]p. F-TS-9908/III.
Order from LC or SLA mi$1.80, ph$1.80 59-19480

Trans. of Byulleten' Izobreteniy (USSR) 1958, no. no. 6, p. 83-84.

Zbryz'kiy, S. and Gutman, L.
100 THOUSAND RUBLES SAVED [AND] LEARNING A NEW TECHNIQUE. [1959] [8]p. MCL-3/V.
Order from LC or SLA mi$1.80, ph$1.80 59-19502

Trans. of Grazhdanskaya Aviatsiya (USSR) 1958 [v. 15] no. 8, p. 10.

The first article reviews some of the money-saving procedures used at the Avia-Maintenance Shop. In the second article the classrooms in the School of Higher Flying Training are described.

Chemical Engineering

IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY. NEFT' I GAZ (USSR) 1959 (News of Institutes of Higher Learning, Petroleum and Gas). [1959]
Order from OTS $0.90, $5.25/6 mo.
Foreign $1.15, $6.75/6 mo.

No. 1, p. 3-134, PB 141 402T-1
No. 2, p. 1-125, PB 141 402T-2
No. 3, p. 3-126, PB 141 402T-3

Consists of abstracts in English.

KHIMICHESKAYA NAUKA I PROMYSHLENNOST' (USSR) 1959, VOL. 4, NO. 2, P. 142-288 (Chemical Science and Industry). [1959] 1v. SOV-63-4-2-(1-39)/39.
Order from OTS $0.70, $4.00/year PB 141 058T-3
Foreign $0.95, $5.50/year

Consists of abstracts in English.

KHIMICHESKAYA PROMYSHLENNOST' (USSR) 1959, NO. 3, P. 1-91 (Chemical Industry). [1959] 1v. SOV-64-59-3-(1-24)/24.
Order from OTS $0.60, $2.25/6 mo. PB 141 059T-12
Foreign $0.85, $3.25/6 mo.

Consists of abstracts in English.

KHIMIYA I TEKHNOLOGIYA TOPLIV I MASEL (USSR) 1959 [V. 4] NO. 7, P. 1-64 (Chemistry and Technology of Fuels and Oils). [1959] [13]p. SOV-65-59-7-(1-12)/12.
Order from OTS $0.50, $3.00/6 mo. PB 141 060T-12
Foreign $0.75, $4.50/6 mo.

Consists of abstracts in English.

Chernyshev, A. B. and Fedoseyev, S. D.
A CONTINUOUS PROCESS FOR THE LOW-TEMPERATURE GASIFICATION OF SOLID FUELS WITH THE USE OF SUPERHEATED STEAM. [1959] 7p. (6 figs. omitted) 5 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-16735

Trans. of Chernyshev, A. B., Izbrannye Trudy (USSR) 1956, p. 286-294.

Ettinger, I. L.
NITROGEN SORPTION BY BLACK COALS (Sorbtsiya Azota Kamennymi Uglyami). [1959] [5]p. 3 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-18545

Trans. of Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk. Izvestiya, 1949, no. 11, p. 1719-1722.

Values of nitrogen sorption by Kuznetsk black coals are given in the pressure range from 0 to 800 millimeters of mercury for 25 and 40 degrees. The purely physical nature of nitrogen sorption by black coals was established. It was shown that the nitrogen capacity of black coals rises when proceeding from fat to lean coals. It was shown that for the temperature and pressure range studied the volume of sorbed nitrogen rises linearly with an increase in pressure. (Author)

Eygenson, A. S., Ivchenko, Ye. G., and Kantor, I. I.
SELECTION OF REFINING PROCESS SCHEMES FOR HIGH SULFUR CRUDES OF THE BASHKIR ASSR (K Vyboru Skhem Pererabotki Vysikosernistykh Neftey Bashkirskoy ASSR). 26 Aug 59 [11]p. (2 illus. omitted). AF 1256037.
Order from LC or SLA mi$2.40, ph$3.30 59-19706

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1959 [v. 4] no. 4, p. 7-12.

Fleyshman, V. G.
DEVELOPMENT OF THE CHLORINE AND CHLORINE PRODUCTS INDUSTRY IN THE USSR (Razvitiye Promyshlennosti Khlora i Khloroproduktov v SSSR). Aug 59 [17]p. RTS no. 1058.
Order from LC or SLA mi$2.40, ph$3.30 59-19445

Trans. of Khimicheskaya Promyshlennost' (USSR) 1957, no. 7, p. 27-32.

Kazanskiy, B. A., Gonikberg, M. G. and others.
INVESTIGATION OF BITUMINOUS COAL HYDROGENATION AT PRESSURES EXCEEDING 1000 ATMOSPHERES. [1959] [18]p. 6 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-18347

Trans. of Akademiya Nauk SSSR. Institut Goryuchikh Iskopayemkh. Trudy (USSR) 1955, v. 5, no. 6, p. 3-15.

An apparatus was constructed for the investigation of the hydrogenation process at temperatures up to 500°C, and hydrogen pressures up to 1,500 to 2,000 atm. The hydrogenation of coal at 420°C, and hydrogen pressure of 300 to 1,700 atm, with and without a catalyst, was investigated. An increase of hydrogen pressure from 300 or 400 to 1,200 or 1,500 atm at 420°C doubles the combined output of benzene and middle oil from the organic mass of the paste. Under these conditions, a catalyst does not significantly affect the rate of the process. This increase in hydrogen pressure increases the degree of coal liquifaction from 78.6 to 95.0% and results in an increase in free water from 3% to 12.4% of the organic mass of the paste. The asphaltene content in heavy oil of coal hydrogenation drops sharply when the hydrogen pressure is stepped up from 41.1% at 300 to 400 atm to 3.1% at 1200 to 1500 atm. As the hydrogen pressure is increased, the following changes take place in the composition of the middle oil: (a) The content of low boiling point fractions increases; the 200 to 240°C fraction in the middle oil increases 1.4 to 1.6 times; (b) the content of unsaturated hydrocarbons decreases, and that of aromatic hydrocarbon increases; (c) the phenol content decreases (from 22.4% at 400°C and 500 to 700 atm to 12.8% at 1,500 to 1700 atm); and (d) the carbon and hydrogen content increases (from 95.2% at 420°C and 300 to 400 atm to 97.7% at 1500 to 1700 atm). As the hydrogen pressure is increased, the following changes in the hydrogenated benzene take place: (a) The low boiling point fractions increase; (b) the unsaturated hydrocarbons decrease, and aromatic hydrocarbons increase; and (c) the carbon and hydrogen content increases.

Lyanders, G. N. and Reznikov, A. D.
THE APPLICATION OF ELECTRIC CURRENT FOR PREPARING ANTHRACITE SEAMS FOR UNDERGROUND GASIFICATION. [1959] [9]p.
Order from LC or SLA mi$1.80, ph$1.80 59-18326

Trans. of Podzemnaya Gazifikatsiya Ugley (USSR) 1957, no. 1, p. 57-60.

Mishagin, R. A.
RECONSTRUCTION OF COMBINATION UNITS AT THE SARATOV REFINERY (Rekonstruktsiya Kombinirovannykh Ustanovok na Saratovskom NPZ). 19 Aug 59 [8]p. AF 1256023.
Order from LC or SLA mi$1.80, ph$1.80 59-19711

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1958 [v. 3] no. 11, p. 23-27.

Civil Engineering

MEKHANIZATSIYA STROITEL'STVA (USSR) 1959, [V. 16] NO. 5, P. 1-33 (Mechanization of Construction). [1959] [11]p. SOV-100-59-5-(1-14)/14.
Order from OTS $0.50, $3.00/6 mo. PB 141 093T-10
Foreign $0.75, $4.50/6 mo.

Consists of abstracts in English.

Mohler, K.
CRITICAL OBSERVATION OF THE EXISTING TIMBER BUILDING REGULATIONS AND SUGGESTIONS FOR THEIR REVISION (Kritische Betrachtung der bestehenden Holzbauvorschriften und Vorschlage fur ihre Neufassung) tr. by Paul Hendon. [1959] [22]p. 11 refs. Trans. no. 4160.
Order from SLA mi$2.70, ph$4.80 59-20046

Trans. of die Bautechnik (Germany) 1958, v. 35, no. 7, p. 261-267.

Design proposals for single and multiple member columns and for certain types of compound transverse beams are submitted for a revised edition of the present DIN 1052. These proposals, to a large extent, take into account certain factors relating especially to wood and the media used for jointing. (Author)

Rocha, Manuel.
EXPERIMENTAL DIMENSIONING OF STRUCTURES (Dimensionnement Experimental des Constructions). [1959] [7]p. (1 fig. omitted) No. 193.
Order from SLA mi$1.80, ph$1.80 59-17925

Trans. of Institut Technique de Batiment et des Travaux Publics, Paris. Annales (France) 1952 [v. 5] no. 235, p. 9-12 (Sect. II B).

Timashov, V. V. and Ivanov, F. M.
INVESTIGATION OF THE UNIFORMITY OF MIXING OF SOILS AND BINDERS BY MEANS OF RADIO-ACTIVE ISOTOPES (Issledovaniye Ravnomernosti Smesheniya Gruntov s Vyazhushchimi Materyalami Metodom Radioaktivnykh Izotopov). Dec 57 [7]p. (3 figs. omitted) C. T. S. no. 405.
Order from LC or SLA mi$1.80, ph$1.80 59-18524

Trans. of Avtomobil'nyye Dorogi (USSR) 1957, v. 20, no. 4, p. 8-9.

Tests showed that a binder forms a finely-dispersed homogeneous mixture with the soil; however, a certain proportion of the binder is present in the sample in the form of zonal accumulations. The uniformity of distribution of the binder in the stabilized soil increases with the increase in the quantity of the binder and is governed by the process by which the sample is prepared.

Electrical and Electronic Engineering

*ELEKTROSVYAZ' (USSR) 1959 [V. 13] NO. 5, P. 3-80 (Electrical Communications). [1959] 1v. SOV-106-59-5-(1-13)/13.
Order from OTS $0.60, $3.50/6 mo. PB 141 099T-15
Foreign $0.85, $5.00/6 mo.

Consists of abstracts in English.

IMPROVED DEVICES FOR ELECTRIC CIRCUIT BREAKERS WITH ARC EXTINCTION BY MEANS OF INSULATING LIQUID JETS, tr. by F. H. B. 10 Apr 59, 14p. (7 figs. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-16184

Trans. of Italian patent 374,500, cl. IX, pat. 26 Aug 39, appl. 2 May 39, pub. Dec 39 (Priority: France, 23 July 38) by Compagnia Generale di Elettricita, Milano.

IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY. ELEKTROMEKHANIKA (USSR) 1958, NO. 11, P. 3-143 (News of Institutes of Higher Learning. Electromechanics). [1959] 1v. SOV-144-58-11-(1-17)/17.
Order from OTS $0.80, $4.50/6 mo. PB 141 101T-5
Foreign $1.05, $6.00/6 mo.,

Consists of abstracts in English.

MICROWAVE RADIO RELAY SYSTEM OF THE USSR. Suppl. no. 8 to AF 1059772. 21 Aug 59 [23]p. (8 figs. omitted) 97 refs. AF 1256028.
Order from LC or SLA mi$2.70, ph$4.80 59-19710

Trans. from Soviet open sources, 1958-1959.

NAUCHNYYE DOKLADY VYSSHEY SHKOLY. ELEKTROMEKHANIKA I AVTOMATIKA (USSR) 1958, NO. 3, P. 3-246 (Scientific Reports of Higher Schools, Electromechanics and Automation. [1959] 1v. SOV-161-58-3-(1-27)/27.
Order from OTS $0.70, $2.50/year PB 141 102T-4
Foreign $0.95, $3.50/year

Consists of abstracts in English.

RADIO ENGINEERING, 1958, VOL. 13, NO. 8, Aug 59, 112p.
Order from PP $30.00/year (15.00/year to individuals)

Trans. of Radiotekhnika (USSR) 1958, v. 13, no. 8, p. 3-70.

RADIO ENGINEERING AND ELECTRONICS: SELECTED ARTICLES. [1959] [135]p. (1 fig. omitted) 373 refs. F-TS-9491/V.
Order from LC or SLA mi$6.90, ph$21.30 59-19518

Trans. of *Radiotekhnika i Elektronika (USSR) 1957, v. 2, no. 11, p. 1344-1389 and 1413-1434.

Contents:
Studies on radio-wave propagation along the surface of the ground, in the USSR, by M. P. Dolukhanov
Ionospheric radio-wave propagation studies in the USSR, by A. N. Kazantsev
Studies on tropospheric propagation of meter, decimeter, and centimeter radio waves in the USSR, by B. A. Vvedenskiy and A. V. Sokolov
Development of noise stability theory in the USSR, by V. I. Siforov

REFERATIVNYY ZHURNAL. ELEKTROTEKHNIKA (USSR) (Journal of Abstracts. Electrical Engineering). [1959]
Order from OTS $1.40, $7.50/6 mo.
Foreign $1.65, $9.00/6 mo.

1958, no. 2, p. 7-82, PB 141 109T-2
1959, no. 5, p. 2-345, PB 141 109T-6

Complete translations of those entries which were originally published in the USSR, excluding those abstracted elsewhere.

STANDARD SPECIFICATIONS FOR ENAMELED COPPER WIRE FOR ELECTRICAL PURPOSES. [1959] 6p. 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20470

Trans. of Revue Générale de l'Électricité (France) 1925, v. 17 [no. 8] p. 312-315.

VESTNIK ELEKTROPROMYSHLENNOSTI (USSR) 1959, V. [30] NO. 7, P. 1-80 (Herald of the Electrical Industry). [1959] 1v. SOV-110-59-7-(1-19)/19.
Order from OTS $0.70, $4.00/6 mo. PB 141 107T-17
Foreign $0.95, $5.50/6 mo.

Consists of abstracts in English.

Cathala, M. J.
REGISTERING APPARATUS FOR THE CONTROL OF INSULATION OF ENAMELED WIRES. [1959] 2p. (4 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20442

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1925, v. 180, 2 Feb, p. 370-373.

Fastovskiy, V. G. and Petrovskiy, Yu. V.
ON COOLING TURBO-GENERATORS MORE INTENSIVELY. 7 Nov 58 [6]p. (equations omitted). M-V. Trans. no. 2500; M. 102.
Order from LC or SLA mi$1.80, ph$1.80 59-18732

Trans. of *Elektrichestvo (USSR) 1958, no. 3, p. 32-35.

The possibilities are examined for achieving more intense cooling in turbo-generators. The discussion includes hydrogen cooling; evaporation cooling; liquid cooling; convection-evaporation cooling; artificial hydrogen cooling; methods for artificial cooling of hydrogen.

Gurevich, L. M.
RAYONNEMENT D'UN TUBE D'IMPULSION PUISSANT AU MOMENT DE L'EXPLOSION [Izlucheniye Moshchnoy Impul'snoy Lampy v Moment Razryva] [Radiation of a Powerful Pulse Tube at the Moment of Explosion] tr. by B. de Trezvinski. 9 Apr 59 [7]p. 2 refs. Trans. no. R 636 (text in French).
Order from LC or SLA mi$1.80, ph$1.80 CEA-tr-R636

Trans. in French of Optika i Spektrosk[opiya] (USSR) 1958, v. 4, no. 2, p. 252-253.

Kniehahn, W.
ELEMENTS OF SWITCHING, DISTRIBUTING, AND CONTROL TECHNIQUE IN MACHINE DESIGN AND ELECTROTECHNICS. [1959] [10]p. 3 refs.
Order from SLA mi$1.80, ph$1.80 59-20469

Partial trans. (p. 739-741) of Maschinenbau (Germany) 1930, v. 9, no. 22, p. 739-744 (cont. from p. 367, 452 and [4]55).

The controllable switch is discussed with respect to its possible use to influence mechanical, hydromechanical, electrical and optical energy in static, dynamic and stato-dynamic form.

Lucius, H.
THE POLYSKOP; A BROAD BAND SWEPT-FREQUENCY TEST CIRCUIT FOR 0.5 TO 400 MC. Sep 59, 39p. (16 figs. omitted).
Order from SLA mi$3.00, ph$6.30 59-20864

Trans. of Rohde und Schwarz Mitteilungen (West Germany) 1958, no. 10, p. 145-154.

A detailed discussion of the principles of the swept-frequency test method is followed by a description of the POLYSKOP, a broad band sweep signal generator with visual display. In addition to technical specifications, explanations for the measurement and examples of possible applications are given. (Author)

Plschel, Bernhard.
ELECTRICAL MEASUREMENTS OF SHORT TIME INTERVALS BY MEANS OF A CONDENSER AND THYRATRON. [1959] 4p. (4 figs omitted) 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20916

Trans. of A[rchiv für] T[echnisches] M[essen und Industrielle Messtechnik] (Germany) 1941 [no. 118] p. T47.

Schmid, Walter.
A NEW METHOD FOR THE DETERMINATION OF THE QUALITY OF HIGH-VOLTAGE LEAD COVERED CABLE. [1959] 14p. (2 figs. omitted) 6 refs.
Order from SLA mi$2.40, ph$3.30 59-20497

Trans. of Revue Générale de l'Electricité (France) 1930, v. 28 [no. 4] p. 127-135.

The method consists of analyzing the elements making up the insulation of the cable and deducing from the results of this analysis the properties of the whole. The author gives the conditions for applying this principle and gives numerical examples from experimental researches on certain cables. (Author)

Schwaiger, A.
DETERMINING OF RESISTANCE TO BREAKDOWN OF HYDROSCOPIC INSULATING MATERIALS. [1959] 12p. (10 figs. omitted) 1 ref.
Order from SLA mi$2.40, ph$3.30 59-20447

Trans. of Arch[iv f[ür] Elektro[technik] (Germany) 1915, v. 3 [no. 10/11] p. 332-344 (Rept. no. 2, Hochspann Lab., Electrotechnical Inst., Karlsruhe Hochschule).

Vizun, Yu. I.
STUDY OF THE PROBLEMS OF DESIGNING MAGNETIC PERMANENT STORAGE DEVICES. [1959] [18]p. 7 refs. M. 157.
Order from LC or SLA mi$2.40, ph$3.30 59-18765

Trans. of unidentified mono. pub. Moscow, 1957.

Weichhardt, Otto.
PRECAUTIONS AND EXPERIENCE IN TRANSFERRING FROM DIN TO ISA FITS. [1959] 14p. (10 figs. omitted) 10 refs.
Order from SLA mi$2.40, ph$3.30 59-20512

Trans. of Werkstattstechnik und Werksleiter (Germany) 1937, v. 31 [no. 19] p. 421-427.

Westermann, E.
SENSITIVE COLD CATHODE OSCILLOGRAPH OF HIGH OUTPUT FOR LOW EXCITING VOLTAGES. [1959] 16p. (26 figs. omitted) 18 refs.
Order from SLA mi$2.40, ph$3.30 59-20448

Trans. of Arch[iv] f[ür] Elektrotechnik (Germany) 1936, v. 30 [no. 2] p. 109-122.

Zandelin, F. G. and Ingelstrom, E. B.
AUTOMATIC DEVICE FOR RECORD CHANGING IN GRAMOPHONES. 29 Dec 50, 10p. (9 figs. omitted). Order from LC or SLA mi$1.80, ph$1.80 59-20068

Trans. of Swedish patent 110303, cl. 42, gr. 20-03, granted 10 Feb 44, pat. from 3 Feb 43 (appl. No. 710/1943) pub. 11 Apr 44, by Aktiebolaget Gylling & Co., Stockholm.

The present invention consists in an automatic device for changing records in gramophones, especially radio-gramophones of the kind in which the gramophone records selected for playing are provided with a second holder pin eccentrically located with reference to the center pin of the gramophone. It is inserted in the shape of a staple above the center pin and is caused at proper time and arrangement to drop down upon the center pin to attain the playing position by displacement of the lower record in the pile by means of a turnable lip, or the like at the upper end of the center pin. The outstanding point in this invention is that the record holder pin is equipped with a spindle by which it is resting in the center pin, which to this end is tubular in shape, the lip being located at its upper end.

Mechanical Engineering

ENERGETIK (USSR) 1959, NO. 8, P. 1-40 (Power Engineer). [1959] 1v. SOV-91-59-8-(1-28)/28.
Order from OTS $0.60, $3.50/6 mo. PB 141 084T-19
Foreign $0.85, $5.00/6 mo.

Consists of abstracts in English.

TEPLOENERGETIKA (USSR) 1959 [V. 6] NO. 7, P. 3-96 (Heat Power Engineering). [1959] 1v. SOV-96-59-7-(1-26)/26.
Order from OTS $0.70, $4.00/6 mo. PB 141 089T-17
Foreign $0.95, $5.50/6 mo.

Consists of abstracts in English.

Davidov, A. A., Shmukler, B. I. and others.
THE DYNAMIC CHARACTERISTICS OF ONCE-THROUGH BOILERS (Dinamicheskiye Kharakteristiki Pryamotochnykh Kotlov). Feb 58 [11]p. 4 refs. C. T. S. 409.
Order from LC or SLA mi$2.40, ph$3.30 59-19626

Trans. of Teploenergetika (USSR) 1956 [v. 3] no. 11, p. 19-25.

A method is described which permits an approximate calculation of the dynamic characteristics of the once-through boiler according to data from thermal calculation for disturbance of water or fuel up to a limit of 20 per cent. In designing once-through boilers the construction and components of the heating surfaces should be determined by calculation of the dynamic characteristics of the boiler, starting from the achievement of conditions for simplest and safest control of the steam parameters. Calculation of the dynamic characteristics and their comparison with experimental data have been carried out on once-through boilers 60-OP 12/300; 67-SP 230/100; SPP-200/140; and SPPN-200/100.

Dyuskin, V. K.
FOR ECONOMY IN THE CONSTRUCTION OF HEATING SYSTEMS. [1959] 10p. (9 figs. omitted) 1 ref.
Order from LC or SLA mi$1.80, ph$1.80 59-18760

Trans. of Vodosnabzheniye i Sanitarnaya Tekhnika (USSR) 1958, no. 2, p. 26-29.

Ivyanskiy, A. Z.
GLASS-CONCRETE HEATING PANELS. [1959] [15]p. (11 figs. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-18762

Trans. of Vodosnabzheniye i Sanitarnaya Tekhnika (USSR) 1958, no. 3, p. 15-21.

Lokshin, V. A. and Krol', L. B.
SOME RECOMMENDATIONS ON THE DESIGN OF NATURAL CIRCULATION BOILERS FOR STEAM OF VERY HIGH PRESSURE AND TEMPERATURE (Nekotoryye Rekomendatsii po Proyektirovaniyu Kotlov s Yestestvennoy Tsirkulatsiyey na Sverkhvysokiye Parametry Para). Jan 58 [23]p. C. T. S. 408.
Order from LC or SLA mi$2.70, ph$4.80 59-19627

Trans. of Teploenergetika (USSR) 1956 [v. 3] no. 11, p. 3-10.

Ordnance, Missiles, and Satellite Vehicles

THE FLIGHT OF THE SECOND SOVIET SPACE ROCKET: EVER HIGHER AND HIGHER; THE COSMOS REVEALS ITS SECRETS; ASTRONOMERS OBSERVED THE ARTIFICIAL COMET. 18 Sep 59 [7]p. AF 1256104.
Order from LC or SLA mi$1.80, ph$1.80 59-19691

Trans. of 3 articles from Pravda [Moscow] (USSR) 1959, 14 Sep.

GUIDED MISSILE INFORMATION, 26 June 59 [3]p. (6 maps omitted). AF 1255912.
Order from LC or SLA mi$1.80, ph$1.80 59-18435

Trans. from open sources, 1959 (USSR, Soviet Bloc and others).

Announcements are made concerning (1) a new ultrasonic method developed by the Soviets for

casting rocket and missile parts that are subjected to stress, which increases their strength and other physical properties because of an extremely fine and uniform grain size, and (2) the construction of new rocket bases in Hungary, Bulgaria, Rumania, Yugoslavia, Albania, and Russia.

GUIDED MISSILE INFORMATION. 7 July 59 [3]p. AF 1255923.
Order from LC or SLA mi$1.80, ph$1.80 59-18436

Trans. from open sources, 1959 (USSR, Soviet Bloc and others).

Announcements are reported concerning the establishment by the Soviets of various missile launching bases, the equipping of eight Baltic-Sea-based Soviet cruisers with rockets, and the conversion of various machinery plants in Russia to military (especially missile) production.

GUIDED MISSILE INFORMATION. 14 July 59 [6]p. (2 illus. omitted) AF 1255938.
Order from LC or SLA mi$1.80, ph$1.80 59-18434

Trans from Open Sources, 1959 (USSR, Soviet Bloc and others.

Technical data are tabulated on Soviet missiles, space vehicles, and satellites. The data given include the class (i.e., air-to-air, surface-to-air, pilotless test missile, etc.), the type of missile, the means of propulsion, the weight, maximum speed, range, and altitude. Suggestions are summarized which were made by Soviet engineers V. Votyakov and B. Shumyatskiy to reduce aerodynamic heating.

Taratynova, G. P.
THE MOTION OF AN ARTIFICIAL SATELLITE IN AN OFF-CENTER GRAVITATIONAL FIELD OF THE EARTH IN THE PRESENCE OF ATMOSPHERIC RESISTANCE. [1959] 16p. 4 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20807

Trans. of Uspekhi Fizicheskikh Nauk (USSR) 1957, v. 63, no. 1 [a, p. 33-50].

The method of calculating the motion of an earth satellite on an electronic computer is described with simultaneous accounting of the atmosphere's resistance, under the conditions of its moving along with the earth, and the deviation of the gravitational field from the central field. The disturbing influences of the sun and moon on the motion of the satellite in relation to the earth are disregarded.

FOOD, HANDLING, AND PACKAGING EQUIPMENT

Food

Arnaudi, Carlo.
MILK TREATED WITH HYDROGEN PEROXIDE IN CHEESE-MAKING. [1959] 4p. 2 refs.
Order from SLA mi$1.80, ph$1.80 59-20679

Trans. of il Mondo del Latte (Italy) [1948, no. 8] p. 271-273.

Caserio, E. and Erba, I.
STUDIES ON THE CHEMICAL AND BIOLOGICAL CONSTITUTION OF GORGONZOLA CHEESE IN RELATION TO QUALITY. [1959] 7p. 4 refs.
Order from SLA mi$1.80, ph$1.80 59-20674

Trans. of Quaderni della Nutrizione (Italy) 1936, v. 3, p. 472-479.

Habicht, L.
THE SCIENTIFIC BASES OF THE CHEESE-MELTING PROCESS. [1959] 49p. [figs. omitted] 10 refs.
Order from SLA mi$3.30, ph$7.80 59-20671

Trans. of Milchwirtschaftliche Forschungen (Germany) 1934, v. 16 [no. 4] p. 347-387.

Köstler, G. and Brodyrick-Pittard, M.
RELATION OF FAT CONTENTS OF "KESSE" MILK TO FAT CONTENTS OF THE CHEESE MADE THEREFROM. [1959] [35]p. 16 refs.
Order from SLA mi$3.00, ph$6.30 59-20673

Trans. of Landwirtschaftliches Jahrbuch der Schweiz (Switzerland) 1918, v. 32, p. 221-248.

Möhler, Klement and Kiermeier, Friedrich.
ACTION OF INORGANIC PHOSPHATES ON ANIMAL PROTEIN. V. THE INFLUENCE OF pH-VALUE ON THE BINDING OF WATER BY COAGULATED MEAT EMULSION, tr. by P. M. M. 10 Sep 57, 11p. (1 fig. omitted) 13 refs.
Order from SLA mi$2.40, ph$3.30 59-20746

Trans. of Z[eitschrift fur] Lebensm[ittel]-Untersuch[ung] u[nd] - Forsch[ung] (West Germany) 1955, v. 100 [no. 4] p. 260-266.

The percentage of water lost and water remaining in the meat emulsion during coagulation (30 min. at 70°C) was ascertained by a new method of water determination. In the pH range of 5.4 to 6.4 the loss of water decreases more and more as the pH value approaches the neutral point. This relationship is also true when phosphates are added. The decrease in water loss during coagulation caused by certain phosphates (about 13%) cannot be confirmed definitely

by statistical statements. Prolongation of the time of coagulation as well as an increase in the temperature of coagulation significantly increases the escape of meat juice. (Author's summary)

Partmann, W.
ARTIFICIAL RIPENING OF MEAT WITH PAPAIN PREPARATIONS, tr. by P. M. M. 12 Apr 56, 11p. 7 refs.
Order from SLA mi$2.40, ph$3.30 59-20784

Trans. of Z[eitschrift] f[ür] Lebensm[ittel]-Untersuch[ung] u[nd] -Forsch[ung] (West Germany) 1955, v. 102 [no. 5] p. 321-329.

Pratolongo, U.
THE ACTIVITY OF ENZYMES AT LOW TEMPERATURES IN RELATION TO THE TECHNIC OF PRESERVATION BY REFRIGERATION. 14 July 50, 8p. 7 refs.
Order from SLA mi$1.80, ph$1.80 59-20769

Trans. of la Rivista del Freddo (Italy) 1937, v. 23, p. 45-48.

Wiechers, S. G.
THE COW AND THE CHICKEN; MILK AND EGGS, tr. by Carl Demrick. [1959] 9p. (4 figs. omitted) 4 refs.
Order from SLA mi$1.80, ph$1.80 59-20645

Trans. of [Nederlands Melk en Zuiveltijdschrift] 1952, v. 6, no. 2, p. 127-136.

As substitutes for albumin, so highly valued in bakery circles, [there are] certain protein containing preparations based for example on casein which, either for reasons of taste or for lack of certain specific properties of egg albumin do not wholly answer for the purpose in question. However in milk there is a protein fraction which shows very close correspondence in properties to ovalbumin (egg albumin). This fraction is present in milk serum (whey) among other things. The gamma globulin component has an adverse effect on the properties of the whey proteins, and therefore must be removed, the means for this are given. In order to arrive at a preparation with the desired protein content, a part of the milk sugar present in the whey must be removed, which can be done by evaporating and cooling the whey and separating the crystallized lactose from the remaining fluid, by filtration or centrifugation. To improve the baking properties and the taste the whey must be desalted. This is done by electrodialysis. The disadvantages of salt removal by ion exchange are given. The salt and sugar-free whey can be dried or evaporated into a product with the desired protein concentration. By the dosing of chemicals, preferably sulphites, the coagulation temperature of the whey protein preparation is reduced to below that of ovalbumin. In this way a whey protein preparation can be made which, in the form of a solution with a 12% protein content, has both the foaming and coagulation properties of the white of a hen's egg and therefore can replace the latter for many purposes, demonstrated by means of two examples of application. In contrast to the previously named egg albumin substitutes based on casein, the whey protein preparation can be called a genuine substitute for egg albumin. (Author)

MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT

FROM THE SPEECHES OF DIRECTORS AND CHIEF ENGINEERS OF THE CONSTRUCTION- AND ROAD-MACHINERY BUILDING PLANTS AT THE BRANCH CONFERENCE IN KIEV ON THE PRESENT STATE OF AND FUTURE PROSPECTS FOR THE PRODUCTION OF NEW MACHINES. 27 Aug 59, 15p. (8 figs. omitted) 1 ref. JPRS: L-916-D.
Order from OTS $0.50 59-11605

Trans. of Stroitel'noye i Dorozhnoye Mashinostroyeniye (USSR) 1958 [v. 3] no. 6, p. 33-39.

USSR INDUSTRIAL EQUIPMENT (TRANSPORTATION, CONSTRUCTION, PRODUCTION, AND POWER MACHINERY) [NO. 15, 2 NOV 59]. [1959] [30]p. 97 refs.
Order from LC or SLA mi$2.70, ph$4.80 59-22265

Trans. of unevaluated information selected from Russian-language publications.

Contents:
Transportation equipment: Automotive industry
  Motor vehicle plants and models
  Automotive parts and equipment
  Bearings
  Motorollers and bicycles
Construction machinery
  Excavators and dredges
  Cranes and unloaders
  Repair facilities
Production machinery
  Machine tools (Statistics, Plant information, Automatic lines and automatics, Grinding and gear-making machines, and Other machine tools)
Presses and foundry machinery
Power machinery
  Turbines
  Electrical machinery
  Diesels
(See also 59-19274, 59-19806)

Bahlecke, F.
DATA ON MILLING WITH CYLINDRICAL CUTTERS [1959] 8p. (40 figs. omitted) 14 refs.
Order from SLA mi$1.80, ph$1.80 59-20462

Trans. of Maschinenbau (Germany) 1930 [v. 9, no. 13] p. 437-444.

Chenot, Eugène-Lucien-Émile.
ROTATING APPARATUS FOR THE DISPLACEMENT OF LIQUIDS OR OF GASES. [1959] 4p. (17 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80
59-20063

Trans. of French patent 353,370, appl. 14 Apr 05, pat. filed 27 June 05, pub. 9 Sep 05.

The invention consists of a rotating apparatus for the displacement of liquids or gases, characterized by the combination of a central body with vanes turning in an appropriate envelope, these vanes being so constructed so as to form a tight joint with the envelope in order to avoid any leakage. (Author)

Dörr, Johannes.
SURFACE DEFORMATIONS AND BOUNDARY FORCES IN CYLINDRICAL ROLLERS AND BOXES (Oberflächenverformungen und Randkräfte bei Runden Rollen und Bohrungen). [1959] [25]p. 4 refs.
Order from SLA mi$2.70, ph$4.80 59-20842

Trans. of Stahlbau (Germany) 1955, v. 24, no. 9, p. 202-206.

Kronenberg, M.
CUTTING TESTS IN JAPAN. [PT. I]. [1959] 12p. (25 figs. omitted) 9 refs.
Order from SLA mi$2.40, ph$3.30 59-20902

Trans. of Maschinenbau (Germany) 1929, v. 8 [no. 10] p. 318-323 and [no. 13, p. 434-437].

Sievers, H[ans].
THE DETERMINATION OF THE DRILLING RESISTANCE OF ROCKS [die Bestimmung des Bohrwiderstandes von Gesteinen]. [1959] [20]p. 13 refs.
Order from SLA mi$2.40, ph$3.30 59-20559

Trans. of Glückauf (West Germany) 1950, v. 86, no. 37/38, p. 776-784.

A method of determining the drilling resistance of rocks is described. The drilling hardness of the rock, and the properties of the rock which decisively influence the wearing effect on the cutting edges are determined therewith as the drilling value and the wear coefficient respectively. There exist relations between the test values and the drilling performances obtained in practice which are expressed mathematically. In the case of percussion drilling with air flushing they apply for various air pressures, diameters, certain constructions of cutting edge and average percussion drill performances; in the case of rotary drilling to a drill diameter of 40 mm and only for one type of cutting edge. (Extracted from Author's Summary)

Windmüller, Benno.
DETERMINATION OF THE DIMENSIONS OF SPUR-GEAR FACE-MILLING CUTTERS FOR INVOLUTE TEETH. [1959] 7p. (11 figs. omitted) 4 refs.
Order from SLA mi$1.80, ph$1.80 59-20466

Trans. of Maschinenbau (Germany) 1930, v. 9, no. 24, p. 800-803.

Zieting, Paul.
PIECE-WORK OR WAGES IN MACHINE TOOL MANUFACTURE? [1959] 5p. (5 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20467

Trans. of Maschinenbau (Germany) 1930, v. 9, no. 24, p. 798-800.

Engines and Propulsion Systems

NEWS IN SCIENCE AND TECHNICS (Novosti Nauki i Tekhniki). [1959] [6]p. MCL-13/III.
Order from LC or SLA mi$1.80, ph$1.80 59-19478

Trans. of Fizika v Shkole (USSR) 1957, no. 6, p. 16-17

A popular exposition of the theory of the photon rocket and interplanetary flight at the speed of light.

Nottebrock, Heinrich.
DRIVING OR DRIVEN ENGINE. 13 July 59, 17p. (31 figs. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-18790

Trans. of German patent 932,556, cl. 14b, gr. 11/10, pat. 19 Aug 51, laid open to insp. 3 Mar 55, granted 11 Aug 55, pub. 5 Sep 55.

The invention relates to a driving or driven engine comprizing one or a plurality of rotors mounted on a shaft and driven by a compressed medium, especially in gaseous form, or also possibly in the form of steam or liquid, or conveying a gas, steam or liquid if the shaft is driven by an external force. The novelty of the invention consists in the fact that the rotor or rotors are provided with connected, preferably continuous surface variations with respect to the normal surface in the radial or axial direction, or in both directions. This normal surface is, for example, a disk which is perpendicularly mounted on a shaft, or a cylinder casing associated with a shaft. According to the concept of the invention the active surface must be different from these perpendicular surfaces. However, this difference must not result from an interruption, but from a preferably continuous change of direction.

Machine Parts and Mechanisms

DEVICE FOR LIMITING THE FEED OF THE SADDLE OF A MACHINE TOOL, tr. by J. C. Levy. 15 Apr 59, 8p. (6 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-16185

Trans. of Italian patent 422,782, cl. IV (4th add. to patent 405,526) appl. 15 June 46, granted 25 June 47 (Priority: Czechoslovakia, 27 Feb 46, based on appl. P-1068) by Società Anonima già Stabilimenti Skoda in Pilson, of Prague.

IMPROVEMENTS IN VALVES, tr. by C. P. 27 July 59, 6p. (6 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-18777

Trans. of French patent 748019, gr. 3, cl. 4, appl. 23 Dec 32, granted 10 Apr 33, pub. 27 June 33 (appl. filed in the U. S. 5 Jan 32) by Compagnie des Freins Westinghouse, residing in France (Seine).

The invention relates to valves or flap valves especially used for controlling the admission of fluid under pressure to other apparatus which it actuates or which it controls. These flap valves find their application primarily in fluid pressure brake equipment.

MULTIPLE-PART IMPELLER FOR CENTRIFUGAL PUMPS WITH VERTICAL AXIS, tr. by J. C. Levy. 9 Apr 59, 5p. (2 figs. omitted) 4 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-16178

Trans. of German patent 509,467, cl. 59b, gr. 5, pat. from 11 Jan 30, granting announced 25 Sep 30, pub. 8 Oct 30, by Elektro-Nitrum Akt.-Ges., Rhina, Baden.

The invention is characterized in that the impeller, which is horizontally divided if necessary, and the pump spindle head, are mounted at the shaft-like upper end of the feed line whose hollow space is in communication with the impeller passages by means of apertures, and are firmly attached to said upper end.

[RADIAL SEALING RINGS: SHAFT PACKINGS]. [1959] [24]p. 12 refs.
Order from SLA mi$2.70, ph$4.80 59-20843

Trans. of V[erein] D[eutscher] I[ngenieure]. Zeitschrift (West Germany) 1955, v. 97, no. 7, p. 226-230.

Aumann, Willy.
COLD FORMING OF PRECISION SCREWS (Spanlos Geformte Schrauben für die Feinmechanische Industrie). [1959] [13]p. 1 ref. (foreign text included).
Order from SLA mi$2.40, ph$3.30 59-20464

Trans. of Maschinenbau (Germany) 1930, v. 9, no. 11, p. 368-373.

The method of manufacturing cold formed screws, as well as the machines used therefor are described briefly. The most important materials for the purpose are discussed. The properties to be obtained with the materials and the working processes used in the cold-pressing of screws are compared with those of machined screws. The mechanical testing method of testing known as the "turning-off" test is described. (Author's abstract)

Höhne, Felix.
CAST TIN; COPPER ALLOYS. [1959] 7p. (2 figs. 4 tables omitted) 8 refs.
Order from SLA mi$1.80, ph$1.80 59-20456

Trans. of Maschinenbau (Germany) 1936 [v. 15, no. 21/22] p. 623-625.

Jürgensmeyer, W.
GENERAL PRINCIPALS FOR THE DESIGN OF ROLLER BEARINGS, tr. by Clamp. [1959] [34]p. 4 refs.
Order from SLA mi$3.00, ph$6.30 59-20898

Trans. of Stahl und Eisen (Germany) 1935, v. 55, no. 21, p. 557-564 and no. 22, p. 586-589 (Bericht 115 des Walzwerksausschusses des Vereins Deutscher Eisenhüttenleute).

Kohaut, A[rtur].
CORRUGATION FORMATION IN ANTI-FRICTION BEARINGS AS A RESULT OF ELECTRICAL CORROSION. [1959] [25]p. 17 refs. TRB no. 233.
Order from SLA mi$2.70, ph$4.80 59-20579

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1948, v. 1, no. 5, p. 197-211.

Ponnath, H[ans].
THE USE OF ANTI-FRICTION BEARINGS IN THE IRONWORKS AS SEEN FROM THE MAINTENANCE POINT OF VIEW. Rept. 141 of the Mechanical Engineering Committee of the Association of German Foundrymen. [1959] [22]p. 4 refs.
Order from SLA mi$2.70, ph$4.80 59-20939

Trans. of Stahl und Eisen (West Germany) 1954, v. 74, no. 7, p. 396-402.

Schenk, G.
METAL SPRAYING AND ITS USE FOR THE PRODUCTION OF WEAR RESISTANT COATINGS. [1959] 10p. (10 figs. 7 refs. omitted) 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20900

Trans. of Maschinenschaden (Germany) 1939, v. 16, no. 5, p. 69-75.

Schmidt, M.
HARD CHROMIUM PLATING, A METHOD FOR REPAIRING WORN MACHINE PARTS. [1959] 6p. (11 figs. refs. omitted)
Order from SLA mi$1.80, ph$1.80 59-20901

Trans. of Maschinenschaden (Germany) 1939, v. 16 [no. 4] p. 54-58.

Schöpf, Antön.
STEEL MILL ROLLER BEARING APPLICATIONS WITH SCHÖPF ROLLER BEARINGS (Ausführung und Bewährung von Rollenlagern, Bauart Schöpf, im Walzwerksbau). [1959] 13p. 1 ref. (foreign text included).
Order from SLA mi$2.40, ph$3.30 59-20582

Trans. of Stahl und Eisen (Germany) 1935, v. 55, no. 24, p. 648-653 (Bericht 117 of Walzwerksausschusses des Vereins Deutscher Eisenhüttenleute)

Manufacturing Equipment and Processes

*AVTOMATICHESKAYA SVARKA (USSR) 1959, [VOL. 12] NO. 7, P. 3-96 (Automatic Welding). [1959] [22]p. SOV-125-59-7-(1-19)/19.
Order from OTS $0.50, $3.00/6 mo. PB 141 125T-18
Foreign $0.75, $4.50/6 mo.

Consists of abstracts in English.

*BYULLETEN' IZOBRETENIY (USSR) 1959 (Bulletin on Inventions). [1959]
Order from OTS $1.90, $10.00/6 mo.
Foreign $2.15, $11.50/6 mo.

No. 6, p. 5-64, PB 141 014T-10
No. 9, p. 5-80, PB 141 014T-9

Consists of abstracts in English.

CROSS SOVIET PRODUCTION OF CERTAIN COMMODITIES. REPT. Dec 59, 18p. 18 refs. SIR-2990.
Order from LC or SLA mi$2.40, ph$3.30 60-13024

Trans. from open Soviet and American sources.

The commodities in question are oil, steel, copper, iron ore, coal, tin, electric power, and communications equipment.

AN INTERESTING CASE OF A DIFFICULTY CAUSED BY THE USE OF PHOSPHOR-BRONZE. [1959] 3p. (2 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20910

Trans. of Giessereipraxis (Germany) 1936, v. 57, p. 213-214.

NEW PERMANENT MOLD CASTING PROCESS FOR HEAVY METAL CASTING. [1959] 3p. (5 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20908

Trans. of Giessereipraxis (Germany) 1936, v. 57, 25 Oct, p. 480-482.

A NEW PROCESS FOR THE PRODUCTION OF DENSE CASTINGS IN NON FERROUS METALS. [1959] 2p. (3 figs. omitted) 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20909

Trans. of Giessereipraxis (Germany) 1936, v. 57, p. 313-314.

PRIBOROSTROYENIYE (USSR) 1959, NO. 6, P. 1-32 (Instrument Manufacture). [1959] [15]p. SOV-119-59-6-(1-18)/18.
Order from OTS $0.50, $3.00/6 mo. PB 141 119T-18
Foreign $0.75, $4.50/6 mo.

Consists of abstracts in English.

SOLDERED JOINT, FREE FROM MECHANICAL STRESS, BETWEEN TWO WORKPIECES AT LEAST ONE OF WHICH HAS THE SHAPE OF A WIRE OR STICK, tr. by F. H. B. 8 July 59, 4p. (3 figs. omitted).
Order from LC or SLA mi$1.80, ph$1.80 59-18791

Trans. of Italian patent 418,823, cl. IV, pat. from 5 Mar 47, appl. 25 June 46, pub. Dec 47 (Priority: Netherlands, 28 Apr 44, appl. 116,497) by N. V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands.

USSR ELECTRONIC AND PRECISION EQUIPMENT [NO. 15, 9 NOV 59]. [1959] [23]p. 43 refs.
Order from LC or SLA mi$2.70, ph$4.80 59-22409

Trans. of unevaluated information selected from Russian-language publications.

Contents:
Items of special interest
Electronic equipment production
Thermoelectric generator
New plants
Shortages
Corrupt practices
Electronic equipment
Printed circuits; automation
Transistorization
Components
Prices
Television

Radios
Recording equipment
Computors
Instruments
General
Electrical instruments
Industrial controls
Test instruments
Radioactivity measuring devices
Optical equipment
Electrical products
(See also 59-19240, 59-19821)

Andreyev, B. I.
A NEW METHOD OF SEALING JOINTS IN CONCRETE AND FERROCONCRETE PIPES. [1959] 2p.
Order from LC or SLA mi$1.80, ph$1.80 59-18759

Trans. of Vodosnabzheniye i Sanitarnaya Tekhnika (USSR) 1958, no. 2, p. 35.

The proposed method is as follows. After the collar has been caulked at one end of the pipe on the edge of the trench, using tarred yarn (on the edge of the trench this can best be done with the pipe in a vertical position), the completed "socket" pipe is let down on to the prepared bed in the trench, another pipe is inserted in the socket and the gap on the other side of the collar is caulked with an asbestos-cement mixture, without tarred yarn or rope. Bobrov's proposal has been approved by the Office of State Construction of the U. S. S. R. (Extracted from the report).

Balkovets, D. S., Orlov, B. D., and Chuloshnikov, P. L.
SPOT AND ROLL WELDING OF SPECIAL STEELS AND ALLOYS [VOL. 1]. [1959] [267]p. F-TS-9459/V-1.
Order from LC or SLA mi$11.10, ph$41.10 59-19767

Trans. of mono. Tochechnaya i Rolikovaya Svarka Spetsial'nykh Staley i Splavov, Moscow, 1957, p. 1-201.

Welding processes are described for parts made of alloyed structural steels, heat-resistant and nonferrous alloys. The term "roll welding" is used instead of "seam welding" because the latter term does not indicate the major characteristic of resistance welding by means of rotating electrodes in the form of rollers. The volume is intended for technicians, jig designers, inspection department personnel, etc. (See also 59-19768)

Balkovets, D. S., Orlov, B. D., and Chuloshnikov, P. L.
SPOT AND ROLL WELDING OF SPECIAL STEELS AND ALLOYS. [VOL. 2]. [1959] [279]p. 89 refs. F-TS-9459/V-2.
Order from LC or SLA mi$11.10, ph$42.60 59-19768

Trans. of mono. Tochechnaya i Rolikovaya Svarka Spetsial Spetsial'nykh Staley i Splavov, Moscow, 1957, p. 202-430.

For abstract see entry for volume 1 (59-19767)

Ballhausen, C.
THE APPLICATION OF ULTRASONIC AND SPARK-EROSION PROCESSES FOR FINE MACHINING (Uber die Anwendung von Ultraschall und Funken-Erosion zur Feinbearbeitung). 4 Apr 56. 16p. (12 figs. omitted) 5 refs.
Order from SLA mi$2.40, ph$3.30 59-17202

Trans. of Werkstattstechnik und Maschinenbau (Germany) 1955, v. 45, no. 11, p. 557-561.

Results of systematic experiments are presented, which give exact particulars about the conditions under which fine machining by ultrasonics and spark-erosion can best be applied.

Brendel, E[rich].
CONTINUOUS-FLOW PROCESS OF NICKEL PLATING. [1959] 7p. (16 figs. omitted) 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20468

Trans. of Maschinenbau (Germany) 1930 [v. 9, no. 22] p. 745-749.

Time-saving equipment for the removal of grease, and for conveying, is described in this paper on the nickel plating process in a large plant. Emphasis is on economic factors.

Courty, André.
STUDY OF THE SUITABILITY OF LIGHT ALUMINIUM ALLOYS FOR CASTING; EFFECT OF THE CHEMICAL COMPOSITION. [1959] 2p. 2 refs.
Order from SLA mi$1.80, ph$1.80 59-20444

Trans. of [Académie des Sciences, Paris]. Comptes Rendus (France) 1930, v. 191, no. 23, p. 1128-1130.

Cz.
WELDING. [1959] 2p. R. T. P. Trans. No. 2441.
Order from SLA mi$1.80, ph$1.80 59-17700

Trans. of Gas- und Elektrowärme (Germany) 1944, pt. 4, p. 74-75.

The process of arc welding is described in general terms.

Davidenkow, N.
CALCULATION OF RESIDUAL STRESSES IN COLD DRAWN TUBES. [1959] [12]p. 9 refs. TRB no. 84.
Order from SLA mi$2.40, ph$3.30 59-20587

Trans. of Zeitschrift für Metallkunde (Germany) [1932] v. 24, no. 2, p. 25-29.

Döhmer, P. W[ilhelm].
THE WAZAU APPARATUS FOR DEEP DRAWING TESTS. [1959] 3p. (4 figs. omitted) 3 refs.
Order from SLA mi$1.80, ph$1.80 59-20458

Trans. of Maschinenbau (Germany) [1929] v. 8, no. 22, p. 772-[774].

Gebhard, K.
PREVIOUS DEVELOPMENT AND PRESENT STATE OF COLD ROLLS (Bisherige Entwicklung und Gegenwärtiger Stand der Kaltwalzen). [1959] [13]p. 16 refs.
Order from SLA mi$2.40, ph$3.30 59-20841

Trans. of V[erein] D[eutscher] I[ngenieure]. Zeitschrift (Germany) 1939, v. 83, no. 9, p. 269-275.

Goldstein, W[alter].
DETERMINATION OF WORKING TIME IN ARC WELDING. [1959] 8p. (3 figs. 2 charts omitted).
Order from SLA mi$1.80, ph$1.80 59-20460

Trans. of Maschinenbau (Germany) 1930, v. 9, no. 14, p. 489-492.

Grothkropp, W.
AUTOMATIC GAGING DURING GRINDING. [1959] 6p. (18 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20548

Trans. of Werkstattstechnik [und Werksleiter] (Germany) 1931, v. 25, no. 8, p. 201-205.

Hänеke, Hans.
MACHINE TOOL CONSTRUCTION IN VARIOUS COUNTRIES. [1959] 7p. (30 figs. footnotes omitted).
Order from SLA mi$1.80, ph$1.80 59-20459

Trans. of Maschinenbau (Germany) 1929 [v. 8, no. 18] p. 611-618.

Herr, A.
RECENT RESULTS OF METALLURGICAL X-RAY INVESTIGATIONS. [1959] [15]p. (21 figs. 1 chart omitted) 2 refs.
Order from SLA mi$2.40, ph$3.30 59-20478

Trans. of Giesserei Z[eitun]g (Germany) 1930, v. 27, no. 21, p. 590-598.

Hessenbruch, Werner.
STUDY OF HIGH FREQUENCY FURNACE. IV. FURTHER CONTRIBUTIONS TO THE METALLURGY OF THE CORELESS INDUCTION FURNACE. [1959] 22p. (22 figs. 9 tables omitted) 24 refs.
Order from SLA mi$2.70, ph$4.80 59-20474

Trans. of Kaiser-Wilhelm-Institut für Eisenforschung, Düsseldorf. Mitteilungen (Germany) 1931, v. 13 [no. 13] p. 169-181.

Hilbert, H.
DETERMINATION OF PIECE WORK TIME IN STAMPING PLANTS. [1959] 16p. (10 figs. omitted).
Order from SLA mi$2.40, ph$3.30 59-20914

Trans. of Werkstatt u[nd] Betrieb (Germany) 1937, v. 70 [no. 5] p. 74-78 and [no. 6] p. 135-136.

Irmann, R.
DEVELOPMENT AND PROPERTIES OF ALUMINIUM ALLOYS FOR CASTING. [1959] 9p. (7 figs. 4 tables omitted) 2 refs.
Order from SLA mi$1.80, ph$1.80 59-20917

Trans. of Werkstatt u[nd] Betrieb (Germany) 1939, v. 72 [no. 5/6] p. 69-73.

Jurgensmeyer, Wilhelm.
APPLICATIONS AND OPERATION OF STEEL MILL ROLLER BEARINGS MADE BY VEREINIGTE KUGELLAGERFABRIKEN A. -G. (Ausführung und Bewährung von Rollenlagern im Walzwerksbau, Bauart Vereinigte Kugellager Fabriken A. -G.) [1959] [21]p. 2 refs.
Order from SLA mi$2.70, ph$4.80 59-20897

Trans. of Stahl und Eisen (Germany) 1935 [v. 55] no. 25, p. 670-680.

Kohaut, Artur.
CONCERNING THE LIFESPAN OF ANTIFRICTION BEARINGS. [1959] 17p. 13 refs.
Order from SLA mi$2.40, ph$3.30 59-20567

Trans. of Verein Deutscher Ingenieure. Zeit[schrift] (West Germany) 1951, v. 93 [no. 10] p. 257-261.

The hitherto conventional evaluation of the running test is shown to be incomplete. By the introduction of the concept of rolling strength it is proposed to determine not only the lifespan of whole bearings but also the rolling strength bearing material; through this it becomes possible to study the results of material failures and the material characteristic, and to create well-defined experimental-conditions. It is to be expected that the experimental results will then be considerably less scattered than with the previous lifespan tests. In this way it will be possible to create a more substantial basis for the calculation of the lifespan of antifriction bearings than we have today. (Author)

Kothe, Erich.
OPTIMUM ARRANGEMENT OF WORK BY TIME STUDY. [1959] 7p. (9 figs. omitted) 4 refs.
Order from SLA mi$1.80, ph$1.80 59-20457

Trans. of Maschinenbau (Germany) 1936, v. 15 [no. 3/4] p. 63-66.

Krämer, Wilhelm.
THE USE OF ROLLER BEARINGS IN SHEET HOT-ROLLING MILLS, tr. by Carl Demrick. Feb 51, 8p.
Order from SLA mi$1.80, ph$1.80 59-20566

Trans. of Stahl und Eisen (West Germany) 1950, v. 70 [no. 21] p. 925-929.

Discussions are presented on (1) reasons for the equipment of sheet hot-rolling mills with antifriction bearings, (2) construction proposals, taking as the point of departure the necessity of the development of an indirect mounting, and (3) execution possibilities in

disposing the bearings in the installation pieces or in the upright columns with taking into account the various practical possibilities.

Kühnlenz, K.
MEASUREMENT OF RUNNING NOISE OF ANTI-FRICTION BEARINGS (Laufgeräuschprüfungen an Wälzlagern). [1959] [33]p. 2 refs.
Order from SLA mi$3.00, ph$6.30 59-20563

Trans. of die Technik (Germany) 1956, v. 11, no. 10, p. 709-716.

Development work by the Central Institute for Bearing Research is reviewed and the causes of noise produced by running antifriction bearings are discussed. The design principles of devices for noise measurement are explained. In addition, the paper deals with the influence of defective shape of bearing components. A method is also described which enables the bearing components (especially the inner rings) to be examined for their share in the production of noise before the bearing is mounted. (Author)

Lemm, Hanns,P.
BACKING ROLLS AND THEIR BEARINGS, tr. by Carl Demrick. [1959] 19p. (8 figs. omitted) 6 refs.
Order from SLA mi$2.40, ph$3.30 59-20565

Trans. of Stahl und Eisen (West Germany) 1950, v. 70, no. 11, p. 452-459.

Discussions are presented on (1) bearing types for backing rolls. Types of backing rolls. Dimensions of the backing rolls, (2) dimensions of the bearings, and (3) dependence of the outside diameter of the backing rolls on the bearing dimensions. (Read before the 55th plenary session on September 13, 1949, in Düsseldorf.)

Lion, A.
DIE CASTING. [1959] 3p. (18 figs. omitted) 9 refs.
Order from SLA mi$1.80, ph$1,80 59-20481

Trans. of Giesserei-Zeitung (Germany) 1930 [v. 27, no. 14] p. 383-385.

Minin, P. I.
INVESTIGATION OF THE DRAWING OF STEEL RODS. [1959] [99]p. 2 refs. F-TS-9660/V.
Order from LC or SLA mi$5.40, ph$15.30 59-19773

Trans. of mono. Issledovaniye Volocheniya Prutkov Stali, Moscow, 1948, 82p.

This volume deals with the problem of investigating the effect of drawing on steel rods with diameters of 25 mm and 30 mm which are used as shafts and rollers in various machines, particularly those used in agriculture. The volume is intended for engineering and technical personnel of machine-building enterprises and for scientific establishments.

Neumann, Friedrich Wilhelm and Siebel, Erich.
COLD PILGER ROLLING OF TUBES. TEST RESULTS OF INVESTIGATIONS ON THE ROLLING PROCESS (Das Kaltpilgern von Rohren. Versuchsergebnisse aus Untersuchungen über den Walzvorgang). [1959] [47]p. 10 refs.
Order from SLA mi$3.30, ph$7.80 59-20940

Trans. of Stahl und Eisen (West Germany) 1954, v. 74, no. 3, p. 133-145.

Pakulla, Edmund.
CONSTRUCTION AND OPERATION OF MODERN 70-TON ELECTRIC-ARC FURNACES FOR STEEL. Rept. no. 617 of the Steel-works committee of the Verein Deutscher Eisenhüttenleute. [1959] [28]p. 11 refs.
Order from SLA mi$2.70, ph$4.80 59-20938

Trans. of Stahl u[nd] Eisen (West Germany) 1957, v. 77, no. 4, p. 197-204.

Rapatz, F[ranz].
THE SURFACE CONDITIONS IN MACHINING OPERATIONS, ESPECIALLY LATHES. [1959] 6p. (17 figs. 4 tables omitted) 12 refs.
Order from SLA mi$1.80, ph$1.80 59-20420

Trans. of Arch[iv] f[ür] d[as] Eisenhüttenwesen (Germany) 1930, v. 3, no. 11, p. 717-720.

Reininger, H.
THE PRODUCTION OF LIGHT METAL SAND, CHILL MOLD, AND DIE CASTINGS. 1938, 21p. (41 figs. omitted) 40 refs.
Order from SLA mi$2.70, ph$4.80 59-20912

Trans. of Giessereipraxis (Germany) 1937, v. 58, 5 Dec, p. 494-497 and 19 Dec, p. 513-518; 1938, v. 59, 2 Jan, p. 10-[12] and 16 Jan, p. 26-30.

Richards, E. T.
THE PRODUCTION OF HEAVY COPPER CASTINGS. [1938] 7p. (7 figs, omitted) 2 refs.
Order from SLA mi$1.80, ph$1.80 59-20911

Trans. of Giessereipraxis (Germany) [1937] v. 58, no. 23/24, p. 230-234.

Rostosky, L.
SOLDERING AND WELDING OF LIGHT METALS. [1959] 8p. 23 refs.
Order from SLA mi$1.80, ph$1.80 59-20810

Trans. of Metallwirtschaft [Metallwissenschaft, Metalltechnik] (Germany) 1930 [v. 9] 13 June, p. 499-502.

This paper deals with soldering and welding of aluminum or magnesium.

Sachsenberg, E.
THE PRECISION OF WORK ON MACHINE TOOLS (IN CONSIDERATION OF THE CUTTING FORCES DEVELOPED). [1959] 3p. (3 figs. 6 diagrams omitted) 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20660

Trans. of die Werkzeugmaschine (Germany) 1930 [v. 34] no. 9, p. 191-193.

Schröder, R. P.
NEW TOLERANCES OF GAGES AND THEIR GRADATIONS FROM THE STANDPOINT TO INTERNATIONAL STANDARDIZATION. PTS. 1-2. [1959] 16p. (2 figs. omitted) 2 refs.
Order from SLA mi$2.40, ph$3.30 59-20546

Trans. of Werkstattstechnik [und Werksleiter] (Germany) 1930, v. 24, no. 14, p. 381-384 and no. 15, p. 410-416.

Shvartsman, I. Sh.
EFFECT OF STOPPER DESIGN ON DURABILITY OF STOPPERS DURING SERVICE (O Vliyanii Konfiguratsii Probok na Ikh Stoykost' v Sluzhbe). Feb 58 [5]p. (5 figs. omitted) C. T. S. 441.
Order from LC or SLA mi$1.80, ph$1.80 59-19610

Trans. of Ogneupory (USSR) 1957, v. 22, no. 4, p. 169-173.

Characteristics of various stoppers used in the open-hearth furnace shop of the Upper Isetsky Steel Casting Plant are described. The behavior of stoppers in service is dependent on their conformation. Screwed stoppers with a thick-walled spherical part characteristically show longitudinal cracks and a breaking apart of the spherical part. Such cracking becomes apparent when ladle and stopper are heated together. Bolted stoppers tend to flake off rather than break apart.

Siebel, E[rich] and Fangmeier, E[rich].
INVESTIGATIONS ON THE POWER REQUIREMENTS IN PRESSING OPERATIONS AND TUBE MANUFACTURE. [1959] 17p. (22 figs. 3 charts 5 tables 9 equations omitted) 11 refs.
Order from SLA mi$2.40, ph$3.30 59-20475

Trans. of Kaiser-W[ilhelm]-Inst[itute] f[ür] Eisenforsch[ung] Dusseldorf. Mitt[ungen] (Germany) 1931, v. 13, no. 2, p. 29-41.

It is possible to compute the power requirements in pressing and tube-forming operations as in the other deformation processes, from the work of deformation which is the product of the deformed volume, the resistance to deformation and the absolute maximum deformation. While in the case of extrusion the elongation is considered the principal deformation, in tube forming the reduction in thickness of the ring-shaped elements of the object is the measure of the work of deformation. The radial deformation increases in this operation from a minimum in the outer zone to an infinitely large amount in the core zone. Because of the lack of uniformity in tube forming, the work of deformation must be determined by taking the sum of the work of deformation for the individual volume elements. The applicability of the theory was tested by experiments in pressing and tube-forming operations with soft lead models; the investigation was extended to a study of technological operations. The so-called inverted extrusion process was found to be superior to the direct method from the standpoint of power consumption. In the Ehrhardt process, towards the end of the operation there is always an increase in pressure due to the position of the head of the ram in the deformation zone so that the power consumption at this point is only a little more than that at the beginning. Model experiments were performed to afford data on the optimum orifice and ram head forms in pressing and tube forming. In the latter operation the theory was found to be tenable as a basis for quantitative determinations in large-scale investigations on the hot-forming of ingot steel. The resistance to deformation and the specific mandrel pressure decrease with an increase in the diameter of the billet and with a decreasing speed of pressing. The variation in the cooling conditions and the time of deformation must be regarded as the cause of this phenomenon. (Author)

Stelljes, A. J. and Weiler, O.
DEEP DRAWING TEST ON LIGHT METALS ACCORDING TO THE WEDGE DEEP DRAWING METHOD (DRP 611, 658). [1959] 10p. (24 figs. footnotes omitted).
Order from SLA mi$1.80, ph$1.80 59-20829

Trans. of Aluminium (Germany) 1938 [v. 20, no. 2] p. 109-117.

Tans, C.
PRELIMINARY CONDITIONS TO THE INTRODUCTION OF WORK- AND TIME-STUDIES IN FOUNDRY OPERATION. [1959] 5p. (2 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20904

Trans. of Giessereipraxis (Germany) 1930, v. 51, no. 5, p. 41-43.

Tatochenko, L. K.
AUTOMATIC CONTROL IN THE CONTINUOUS CASTING OF STEEL (Avtomatizatsiya Upravleniya Nepreryvnoy Razlivkoy Stali). Feb 58 [5]p. C. T. S. 436.
Order from LC or SLA mi$1.80, ph$1.80 59-19611

Trans. of Stal' (USSR) 1956 [v. 16] no. 3, p. 212-214.

The use of radioactive isotopes has enabled the development of reliable instruments for the measurement of the liquid metal level in the crystalliser and for the control of this level. This, in turn, has created the necessary conditions for the complete automation of the devices regulating the continuous casting. (Author)

Vaynberg, G. S.
SELECTION OF THE SIZE OF INDUCTOR AND CHARGE FOR A CORELESS INDUCTOR FURNACE (Vybor Razmerov Induktora i Zagruzki Induktsionnoy Besserdechnikovoy Elektropechi). 24 Jan 55 [12]p.

2 refs. (foreign text included) M-V. Trans. no. 2051; M. 39.
Order from LC or SLA mi$2.40, ph$3.30 59-18662

Trans. of Elektrichestvo (USSR) 1954, no. 10, p. 29-32.

The relation between the geometrical dimensions of induction furnaces with a capacity of 75 to 1200 kgs, and their electrical efficiency is determined. Heat losses are disregarded. The recommended ratios between the inductor and the charge are given. (Metropolitan-Vickers abstract)

Wallichs, A. and Dabringhauss, H.
MACHINABILITY AND STRENGTH PROPERTIES OF STEEL AND CAST STEEL. [1959] 7p. (17 figs. omitted) 11 refs.
Order from SLA mi$1.80, ph$1.80 59-20465

Trans. of Maschinenbau (Germany) 1930, v. 9, no. 8, p. 257-262.

Zeerleder, A. von.
COMPARISON OF ALUMINUM SAND CASTING AND CHILL MOLD CASTING. [1959] 6p. (6 figs. 3 tables omitted).
Order from SLA mi$1.80, ph$1.80 59-20440

Trans. of Giesserei (Germany) 1940 [v. 27, no. 1] p. 12-14.

Transport, Traction and Hoist Facilities

Bove, E. G. and Bystritskiy, Kh. Ya.
IMPROVING THE DESIGN OF THE N8 ELECTRIC LOCOMOTIVE (Uluchshit' Konstruktsiyu Elektrovoza H8) 21 Nov 58 [8]p. (6 figs. omitted) M-V. Trans. no. 2493; M. 137.
Order from LC or SLA mi$1.80, ph$1.80 59-18747

Trans. of Elekt[richeskaya i] Teplovoz[naya] Tyaga (USSR) 1958, no. 5, p. 4-9.

Discussions include recommendations made by a special commission set up to examine the operation of the eight-axle H8 electric locomotive; contactors, arc-extinction chamber; protection system; commutation; centre bearings, axle boxes; minor problems.

Dolgov, V. A.
THE TEM 1 DIESEL LOCOMOTIVE FROM THE BRIANSK WORKS (Teplovoz Tem 1 Bryanskogo Zavoda). 17 Nov 58 [5]p. (3 figs. omitted). M-V. Trans. no. 2492; M. 138.
Order from LC or SLA mi$1.80, ph$1.80 59-18748

Trans. of Elekt[richeskaya i] Teplovoz[naya] Tyaga (USSR) 1958, no. 8, p. 32-33.

Müller, C. Th.
[THE DERAILMENT OF THE RAILROAD WHEEL] (Der Eisenbahnradsatz). [1959] 2p.
Order from SLA mi$1.80, ph$1.80 59-20572

Partial trans. (summary only) of Glasers Annalen (Germany) 1953 [v. 77, no. 9] p. 264-281.

Osipov, S. I.
THE VL22^{M} ELECTRIC LOCOMOTIVE WITH NB-411 TRACTION MOTORS (Elektrovoz VL22^{M} s Tyagovymi Dvigatelyami NB-411). 14 Nov 58 [5]p. (4 figs. omitted) 1 ref. M-V. Trans. no. 2491; M. 139.
Order from LC or SLA mi$1.80, ph$1.80 59-18749

Trans. of Elekt[richeskaya i] Teplovoz[naya] Tyaga (USSR) 1958, no. 7, p. 10-12.

Discussions include reasons for introduction of the new traction motor; Differences in design of the old and new motors; enlarged air gap; pole shape; and securing the armature winding.

Rubchinskiy, Z. M. and Petrov, G. A.
ELECTRIC BRAKING OF MOTOR COACH UNITS (Elektricheskoye Tormozheniye Motorvagonnykh Sektsii). 21 Nov 58 [8]p. (6 figs. omitted) M-V. Trans. no. 2494, M. 136.
Order from LC or SLA mi$1.80, ph$1.80 59-18746

Trans. of Elekt[richeskaya i] Teplovoz[naya] Tyaga (USSR) 1958, no. 1, p. 7-10.

A method is described for regenerative-rheostatic braking designed specifically for motor coach traction.

Schulze-Manitius, Hans.
IMPROVEMENTS IN MANUAL OVERHEAD TROLLEY CONVEYORS. [1959] 5p. (5 figs. omitted) 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20441

Trans. of Giesserei (Germany) 1931, v. 18 [Neue Folge v. 4] no. 5, p. 98-101.

Suspensions and switches are described which make it possible to convey materials especially sensitive to shock.

MATERIALS

Papsdorf, Werner.
STRESS CORROSION AND CREEP OF HIGH STRENGTH STEEL WIRE FOR PRESTRESSED CONCRETE. [1959] 10p. 10 refs.
Order from SLA mi$1.80, ph$1.80 59-20849

Trans. of Stahl und Eisen (West Germany) 1958 [v. 78, no. 21] p. 1472-1475.

Ceramics and Refractories

OGNEUPORY (USSR) 1959 [V. 24] NO. 6, P. 241-288 (Refractories). [1959] [13]p. SOV-131-59-6-(1-15)/15.
Order from OTS $0.50, $3.00/6 mo. PB 141 134T-18
Foreign $0.75, $4.50/6 mo.

Consists of abstracts in English.

STEKLO I KERAMIKA (USSR) 1959 [VOL. 16] NO. 7, P. 1-48 (Glass and Ceramics). [1959] [19]p. SOV-72-59-7-(1-19)/19.
Order from OTS $0.60, $3.50/6 mo. PB 141 068T-17
Foreign $0.85, $5.00/6 mo.

Consists of abstracts in English.

Kitaygorodskiy, I. I.
CORUNDUM "MICROLITE" AND ITS STRUCTURE (Korundovyy Mikrolit i Yego Struktura). Feb 58 [5]p. (2 figs. omitted) 7 refs. C. T. S. 399.
Order from LC or SLA mi$1.80, ph$1.80 59-19629

Trans. of Akademiya Nauk SSSR. Doklady, 1953, v. 90, no. 2, p. 225-226.

Kuznetsov, A. Ya., Kruglova, A. V., and Kryzhanovskiy, B. P.
THE HEATING OF GLASS AND CERAMIC VESSELS BY MEANS OF SEMI-CONDUCTING FILMS (Nagrev Steklyannoy i Keramicheskoy Posudy Poluprovodnikovymi Plenkami). Feb 58 [5]p. (4 figs. omitted) 3 refs. C. T. S. 421.
Order from LC or SLA mi$1.80, ph$1.80 59-19619

Trans. of Zavodskaya Laboratoriya (USSR) 1956, v. 22, no. 8, p. 993-995.

Makarychev, A. R.
LIFE OF REFRACTORY STEELMELTING LADLE LININGS (Sluzhba Ogneuporov v Futerovke Staleraz-livochnykh Kovshey). Feb 58 [6]p. C. T. S. 425.
Order from LC or SLA mi$1.80, ph$1.80 59-19617

Trans. of Ogneupory (USSR) 1957, v. 22, no. 3, p. 105-108.

Yeremenko, V. N. and Beynish, A. M.
CONDUCTIVITY OF THE BINARY SYSTEMS FORMED BY REFRACTORY OXIDES (Elektroprovodnost' Dvoynykh Sistem, Obrazovannykh Ogneupornymi Okislami). Dec 57 [19]p. 31 refs. C. T. S. no. 374.
Order from LC or SLA mi$2.40, ph$3.30 59-18525

Trans. of Zhurnal Neorganicheskoy Khimii (USSR) 1956, v. 1, no. 9, p. 2118-2130.

A bridge scheme is suggested with direct current feed and alternating current frequency (500 c/s) for measuring electrical conductance of ceramic specimens at high temperatures. Shrinkage during the sintering of the samples was measured and the electrical conductance was studied at temperatures of 20 to 900°C in binary systems of oxides Al_2O_3-Cr_2O_3; CaO-MgO; CaO-TiO_2; NiO-TiO_2; ZrO_2-TiO_2; MgO-Cr_2O_3 and CaO-Cr_2O_3. It is shown that an analysis of the curves conductance - composition at different temperatures formed by oxides can serve as a physico-chemical method of analysis of these systems. As a result of the study of the curves of shrinkage vs composition and resistivity vs composition the conclusion was reached that the following compounds are present in the systems; CaO · TiO_2 in the system CaO-TiO_2; NiO · TiO_2 in the system NiO-TiO_2; ZrO_2 · TiO_2 in the system ZrO_2-TiO_2 and MgO · Cr_2O_3 in the system MgO-Cr_2O_3. (Author)

Fuels, Lubricants, and Hydraulic Fluids

A SCHEMATIC MAP OF THE LOCATION OF THE MAIN RESOURCES OF NATURAL AND OIL-WELL GAS AS WELL AS TRUNK GAS-PIPE LINES IN THE EUROPEAN USSR AND CENTRAL ASIA. [1959] [1]p. AID-GR 89.
Order from LC or SLA mi$1.80, ph$1.80 60-13026

Trans. from Priroda [Moscow] (USSR) 1958 [v. 47] no. 8, p. 14, col. 1-2.

Kullmann, Werner W.
THE ACTION OF MOLYBDENUM DISULPHIDE AS HIGH PRESSURE ADDITION TO ANTI-FRICTION BEARING GREASE (Die Wirkung von Molybdändisulfid als Hochdruck-Zusatz zu Wälzlagerfett). [1959] [10]p. 3 refs.
Order from SLA mi$1.80, ph$1.80 59-20846

Trans. of Erdöl und Kohle (West Germany) 1956, v. 9, [no. 6] p. 380-382.

Levin, E. D.
CAUSES OF FORMATION OF SPONGY COKE AND METHODS OF COMBATTING IT (Prichiny Obrazovanya Gubki v Kokse i Metody Bor'by a Ney). Feb 58 [10]p. 1 ref. C. T. S. 417.
Order from LC or SLA mi$1.80, ph$1.80 59-19621

Trans. of Koks i Khimiya (USSR) 1956, no. 8, p. 28-33.

Sponge forms in coke in the upper part of the coke cake and extends along the total length. The greater part is near the oven doors where the temperature is lower than in the rest of the coke cake. Sponge in its cross section resembles a trapezium with its minor base downwards. The structure of the sponge along its height is unhomogeneous and depends on conditions under which the process of the formation takes place. The amount of sponge formed in the process of coking

depends on the coking properties of the coal blend, which properties should be appraised by the difference of temperatures of hardening and softening (Plastometric curve); on the temperature regime of coking moisture content of the coal blend and the freedom to swell up. The following conditions must be observed for the elimination of sponge in coke: (a) The difference of temperatures of hardening and softening of the coal blend should not be above 65°; (b) The temperatures on top of the coke cake 1000± 50°; and (c) the moisture content of the coal blend should not be lower than 8 per cent. The result of the work carried out was the establishment of the extent of heating of coke ovens which ensures a temperature along the axis of the cake of 1000 - 1050°, as the result of which the amount of sponge decreases 2.3 times. This research made it possible to incorporate changes into the hypothesis of sponge formation, which can now be formulated as follows: The formation of spongy coke takes place in the process of coking at the expense of the swelling up of the softened gasproof mass of the charge by the gases given off as a result of pyrochemical decomposition of coals with the freedom of intumescence. The most important factor in the process of sponge formation must be considered to be the duration of the softened gasproof layer and the freedom of swelling up. The duration of the existence of a softened layer and, therefore, the amount of the forming sponge decreases with the increase of the degree of humidification of the coal blend, with the rise of temperatures of coking and a decrease in the difference in temperatures of hardening and softening of the coal blend. (Author's conclusions)

Sobolev, N. N., Beloyusov, M. M. and others.
FLAME TEMPERATURE OF A LIQUID PROPELLANT ROCKET ENGINE, PTS. I-II [AND] PYROMETRIC STUDY OF THE FLAME OF AN OXYGEN-SILICON-ALUMINUM FUEL (Temperatura Fakela Zhidkostnogo Reaktivnogo Dvigatelya, I and II (and) Pirometricheskoye Issledovaniye Plameni Kislorodnogo-Kremne-Alyuminiyevogo Topliva). 22 Sep 59 [10]p. (2 figs. omitted). AF 1256112.
Order from LC or SLA mi$1.80, ph$1.80 59-19690

Trans. of excerpts from *Zhurnal Tekhnicheskoy Fiziki (USSR) 1959, v. 29, no. 1, p. 27-44 and no. 4, p. 506-513.

Sobolev, N. N. and others.
PYROMETRIC INVESTIGATION OF THE FLAME OF OXYGEN-SILICON-ALUMINUM FUEL (Pirometricheskoye Issledovaniye Plameni Kislorodno-Kremne-Alyuminiyevogo Topliva). 14 Aug 59 [2]p. AF 1256013.
Order from LC or SLA mi$1.80, ph$1.80 59-19713

[Summary] trans. of *Zhurnal Tekhnicheskoy Fiziki (USSR) 1959, v. 29, no. 4, p. 506-513.
Also available in 59-19690, mi$1.80, ph$1.80, 22 Sep 59 [10]p.

The metal powder was burnt as a pulp, mixed with water in a specially constructed combustion chamber, which made pyrometric and spectroscopic measurement possible. A continuous-combustion experiment was usually 5- to 6-minutes long, with a rate of pulp consumption from 3.5 to 4.6 kg per minute. The flame temperature, determined according to the color method, was found to be 3200K (absolute temperature). The chemical composition of the metal fuel in approximate figures was: silicon, 40 to 45%; aluminum, 40 to 45%; manganese, 2 to 3%; iron, 4 to 6%; titanium, 1 to 2%. Ten percent of the particles had a size from 150 to 75 microns, and 90 percent were smaller than 75 microns. The metal to water ratio in pulp (by weight) was for the normal rate of combustion 1:1.4. Further experiments showed that a change of this ratio from 1.6:1 to 0.8:1 decreased the flame temperature by 450 degrees. The excess oxygen ratio changed in the range from 0.9 to 1.4. At the temperature of 3200K the basic products of combustion, Al_2O_3 and SiO_2, aluminum oxide and silicon dioxide, not only will melt, but one of them, SiO_2, will also be found in the gaseous state (temperature of evaporation 2863K). Al_2O_3 will be found in a state close to the boiling point (3353K). The experiments show the existence of hot and cold zones in the flame. The temperature (3200K) refers to the hot part of the flame. (See also 59-19690)

Leather and Textiles

Horn, C[hristian F.].
α-ω-DICARBOXYLDISULPHONES AND THEIR HIGH-MOLECULAR FIBRE-FORMING POLYCONDENSATION PRODUCTS. [1959] (21 refs. omitted) 36p.
Order from SLA mi$3.00, ph$6.30 59-20782

Trans. of Makromol[ekulare] Chem[ie] (Switzerland) 1959, v. 30, no. 2/3, p. 123-153.

Küntzol, A. and Stirtz, T.
STUDIES OF SALT STAINS. 16 July 54, 23p. 19 refs.
Order from SLA mi$2.70, ph$4.80 59-20613

Trans. of das Leder (West Germany) 1954, v. 5 [no. 5] p. 97-109.

Salt stains appear in the cured hide on the flesh side, on the grain and in the middle layers of the hide. The flat areas in which the skin tissue has been changed by salt stains and which lie parallel to the skin surface and are called middle layer salt stains are surrounded on all sides by normal skin tissue. In less frequent cases, non-typical salt stains occur which are predominantly vertical to the skin surface. All these types of salt stains show the common characteristic of hardening of the fibers caused by a granular deposit (granulation) which may be removed with the aid of strong acids, e.g., the use of a strong pickle solution. Inside the granulated fiber network bacteria are found only occasionally in flesh side and grain salt stains, the middle layer salt stains are free of microorganisms. Therefore, bacteria cannot be regarded as the final cause for salt stain formation. The salt stains are regarded as precipitations of post-mortal, autolytic decomposition products of blood and non-collagenic skin protein, which under the influence of alkaline earth salts are formed in the hide salt. (Author)

Molzer, Franz.
DYEING WITH PIGMENTS BY THE ACRAMIN FKLN METHOD. [1959] 10p.
Order from SLA mi$1.80, ph$1.80 59-20827

Trans. of Textil-Praxis (West Germany) 1958, v. 13, no. 11, p. 1157-1160.

Natta, G[iulio].
A NEW ITALIAN DEMONSTRATION IN THE TEXTILE INDUSTRY: THE POLYPROPYLENE FIBRE. [1959] 18p. 10 refs.
Order from SLA mi$2.40, ph$3.30 59-20861

Trans. of la Chimica e l'Industria (Italy) 1959, v. 41, no. 7, p. 647-652.

Isotactic polypropylene, composed of linear macromolecules of an exceptionally uniform steric structure, is adequate for production of textile fibres presenting high crystallinity and great strength. The elastic characteristics of these fibres depend on the steric purity of the polymer and can vary freely between large limits. As a result of their density (0.90-0.92--which is lower than any other known textile fibre, artificial as well as synthetic), of the low cost of the monomer, and of the simplicity of the spinning process, one can foresee wide and important applications of the polypropylene fibres in the textile field. (Author's abstract)

Schwertassek, Karl.
THE STRUCTURE OF POLYAMIDE FIBER. [1959] 22p. 6 refs.
Order from SLA mi$2.70, ph$4.80 59-20824

Trans. of Faserforsch[ung und] Textiltech[nik] (Germany) 1955 [v. 6] no. 2, p. 45-53.

Paints and Finishes

CHROME YELLOW FROM METALLIC LEAD, tr. by Martin J. Berger. 7 Dec 50 [3]p.
Order from SLA mi$1.80, ph$1.80 59-20067

Trans. of Farbe und Lack (West Germany) 1949, v. 55, no. 9, p. 326.

Karsten, A.
PROGRESS IN ENAMELING TECHNIQUE. [1959] 1p. 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20676

Partial trans. p. 226 of [Chemisch-Metallurgische Zeitschrift; die] Metallborse (Germany) 1935, v. 25 [no. 15] p. 225-226.

Information is presented on the Schoop spray process.

Reiser, W[erner].
ANALYTICAL INVESTIGATION OF POLYESTER CONDENSATION RESINS. 12 Nov 59 [7]p. (4 figs. 2 tables, refs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20851

Trans. of Farbe und Lack (West Germany) 1959, v. 65, no. 7, p. 370-373.

Whitehurst, Harry B. and Otto, William H.
APPLICATION OF A METALLIC COATING ON GLASS FILAMENTS, tr. by P. C. C. 27 July 59, 15p. (11 figs. omitted).
Order from LC or SLA mi$2.40, ph$3.30 59-18781

Trans. of French patent 1,092,604, gr. 4, cl. 6, appl. 6 Nov 53, granted 10 Nov 54, pub. 25 Apr 55 (appl. in the U. S. 10 Nov 52 and 15 Nov 52) by Owens-Corning Fiberglass Corporation.

Photographic Materials

PROCEDURE FOR THE PHOTOCHEMICAL PRODUCTION OF COLLOIDAL PRINTING PLATES, PREFERABLY FOR PRINTING WITH WATER BASE INKS, IN WHICH THE UNEXPOSED COLLOID PARTS REMAIN PRESERVED. [1959] [5]p.
Order from LC or SLA mi$1.80, ph$1.80 59-17120

Trans. of German patent 465381, R 66498, VI/57d, granted 30 Aug 28, pat. from 20 Jan 26, by Rainbow Photo Reproductions, Inc., New York.

The procedure for the photochemical production of colloid printing plates, in which the unexposed colloid parts remain preserved, preferably for the printing with water base inks, is characterized by the fact that after washing out the unexposed chromate salt, the colloid layer is treated in a solution of a dioxyphenol, such as hydroquinone, which imparts a relatively larger increase in hardness to the exposed parts of the layer.

ZHURNAL NAUCHNOY I PRIKLADNOY FOTOGRAFII I KINEMATOGRAFII (USSR) 1959, V. 4, NO. 3, P. 161-240 (Journal of Scientific and Applied Photography and Cinematography). [1959] 1v.
SOV-77-4-3-(1-16)/16.
Order from OTS $0.50, $3.00/year PB 141 073T-8
Foreign $0.75, $4.50/year

Consists of abstracts in English.

Gilev, S. S., Markhilevich, K. I., and Sheberstov, V. I.
COMMENTS ON K. I. MARKHILEVICH AND V. I. SHEBERSTOV'S PAPER ENTITLED: "CRITICAL REVIEW OF SPEED CRITERIA USED IN DIFFERENT

SENSITOMETRIC SYSTEMS" [AND] THE PROBLEM OF SELECTING THE OPTIMUM SPEED CRITERION (ANSWER TO S. S. GILEV'S NOTE). [1959] 10p. 25 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20838

Trans. of Zh[urnal] Nauch[noy i] Priklad[noy] Fot[ografii i] Kinemat[ografii] (USSR) 1958, v. 3, no. 4, p. 289-293.

Gilev's comments uphold the $0.2 + D_0$ speed criterion that is used in the Soviet sensitometric system (Gost 2817-50), which had been previously criticized by Markhilevich and Sheberstov (Uspekhi Nauch. Fot. 5: 161, 1957). The latter authors reply that the optical density $D = 0.2 + D_0$ cannot be a universal speed criterion for all forms of pictorial photography and motion pictures.

Plastics

MODIFIED SCHIFF BASES AS ACCELERATORS FOR PRODUCTION OF POLYURETHAN FOAMS AND ELASTOMERS. [1959] 7p. 3 refs.
Order from RIS $12.50 RIS rept. 61027

Trans. of German patent application F 18 712 (39c, 6) DAS 1 033 896, by Farbenfabriken Bayer A. G., Leverkusen, filed 22 Oct 55, pub. 10 July 58.

PROCESS FOR MANUFACTURING SHRINK-RESISTANT AND BOIL-FAST RIGID POLYURETHAN FOAMS. 26 June 59, 9p. 3 refs.
Order from RIS $18.00 RIS rept. 61029

Trans. of German patent application F 18 241 (22/04, 39 b) DAS 1 022 022, by Farbenfabriken Bayer A. G., Leverkusen, filed 20 Aug 55, pub. 2 Jan 58.

Shugal, Ya. L. and Baranovskiy, V. V.
LAMINATED PLASTICS: EXTRACTS. [1959] [20]p. 42 refs. M.164.
Order from LC or SLA mi$2.40, ph$3.30 59-18771

Trans. of extracts from chap. 1, 2, 4, 6 and 10, and table of contents of unidentified mono. pub. Moscow Leningrad, 1953.

Rubber and Elastomers

Bartenev, G. M
ON THE THEORY OF THE DRY FRICTION OF RUBBER (K Teorii Sukhogo Treniya Reziny). Feb 58 [6]p. 5 refs. C. T. S. 431.
Order from LC or SLA mi$1.80, ph$1.80 59-19613

Trans. of Akademiya Nauk SSSR. Doklady, 1954, v. 96, no. 6, p. 1161-1164.

It follows from both theory and experiments that the physical nature and the mechanism of dry friction of rubber and of solid bodies are fundamentally different. Unlike solid bodies, rubber is characterized by the absence of static friction (the coefficient and the force of static friction are equal to zero). The application to rubber of the laws of static friction of solid bodies is therefore devoid of any physical sense. Theory of friction is developed that can be applied to the friction of high polymer amorphous substances above the temperature of transition to the glassy state, and in particular, to the sliding of polymers past the walls. The theory gives a satisfactory explanation of the well known fact that the force of friction of highly elastic substances (including rubber) increases with an increase in the sliding velocity.

Blokh, G. A.
STUDY OF NATURAL RUBBER VULCANISATION BY THE TAGGED ATOM METHOD (Issledovaniye Protsessa Vulkanizatsii Kauchuka Metodom Mechenykh Atomov). Nov 57 [22]p. 46 refs. C. T. S. no. 369.
Order from LC or SLA mi$2.70, ph$4.80 59-16982

Trans. of Khimicheskaya Promyshlennost' (USSR) 1956, no. 2, p. 78-89.

Hofmann, G.
THE USE OF ELECTRON MICROSCOPE IN RUBBER RESEARCH. [1959] 14p. 50 refs.
Order from SLA mi$2.40, ph$3.30 59-20922

Trans. of Plaste u[nd] Kautschuk (Germany) 1955, v. 2, no. 11, p. 249-252.

The applicability of the electron microscope in the field of rubber research includes the investigation of solid rubbers, latex types, fillers and the system of solid rubber-fillers.

Segalevich, A. Ye.
PLASTICISERS PROMOTING THE ACTION OF FILLERS IN RUBBER MIXTURES (Issledovaniye Myagchiteley, Aktiviziruyushchikh Deystviye Napolniteley v Rezinovykh Smesyakh). Jan 58 [9]p. 12 refs. C. T. S. no. 430.
Order from LC or SLA mi$1.80, ph$1.80 59-18535

Trans. of Khimicheskaya Promyshlennost' (USSR) 1956, no. 6, p. 333-338.

Votinov, M. P. and Kuvshinskiy, E. V.
ADIABATIC EXTENSION AS A METHOD FOR STUDYING THE NATURE OF THE ELASTICITY OF ELASTOMERS (Adiabaticheskoye Rastyazheniye kak Metod Izucheniya Prirody Uprugosti Rezinopodobnykh Materialov). Jan 58 [12]p. 4 refs. C. T. S. no. 418.
Order from LC or SLA mi$2.40, ph$3.30 59-18532

Trans. of Zhurnal Tekhnicheskoy Fiziki (USSR) 1955, v. 25, no. 12, p. 2157-2162.

A direct method is suggested for studying the nature of rubber elasticity, using deformations carried out under conditions when there is no thermodynamic equilibrium. This method, applied to the investigation into the nature of the elasticity of "crystallizing" and "noncrystallizing" rubbers without fillers, has proved successful. (Author)

Wood and Paper

THE PERFUMES IN PAPERTRADE AND PASTEBOARD MANUFACTURE. [1959] [4]p.
Order from SLA mi$1.80, ph$1.80 59-20066

Trans. of la Papeterie (France) 1926, 10 Aug, p. 722 and 725; 25 Aug, p. 769-770; 10 Sep, p. 821-822; 10 Oct, p. 917-918 and p. 921.

Aaltio, E[rkki] and Jouhikainen, P[ekka].
THE EFFECT OF SOME POLYSACCHARIDE ADDITIVES ON THE PROPERTIES OF PAPER. Aug 59, 11p. (5 figs. omitted) 18 refs.
Order from SLA mi$2.40, ph$3.30 59-20801

Trans. of Paperi ja Puu (Finland) 1958, v. 40, no. 11, p. 561-568.
Another trans. is available from SLA mi$2.40, ph$3.30 as 59-15723 [1959] [15]p.

Aspen hemicellulose, xylan isolated from oat hulls, locust bean gum or galactomannan, and sodium alginate were added to bleached spruce pulp which was submitted to beating tests in a Lampén beater. Paper chromatographic analysis showed that galactomannan has the greatest affinity for the cellulose fiber. The changes in the characteristics of the pulp were small for sodium alginate. Xylan and aspen hemicellulose improved the beatability, while the others had the opposite effect. Xylan gave excellent results. Hemicellulose isolated from agricultural waste products may be of importance as a paper additive.

Dosoudil, Anton.
SPECIFICATIONS FOR WOOD FIBRE BOARDS: HISTORY OF GERMAN SPECIFICATIONS AND COMPARISON WITH THE SPECIFICATIONS OF OTHER COUNTRIES (Gütebestimmungen für Holzfaserplatten: Geschichte der deutschen Gütebestimmungen und ihr Vergleich mit den Bestimmungen anderer Länder). [1959] [35]p. 17 refs.
Trans. no. 4104.
Order from SLA mi$3.00, ph$6.30 59-20051

Trans. of Holz als Roh- und Werkstoff (West Germany) 1957, v. 15 [no. 12] p. 500-511.

The quality specifications for wood fibre boards of the following countries are compared: Germany, Great Britain, Japan, Sweden-Finland-Norway, Union of South Africa and the U.S.A. It appears from this comparison that the wood fibre boards produced in Germany meet very high quality standards. The value of this comparison would be still greater if it were possible to expose all boards manufactured in accordance with the individual quality specifications to the same testing conditions. It is regrettable that this endeavour still encounters too many difficulties. (Author's English summary)

Graf, Otto.
IMPORTANT TECHNICAL PROPERTIES OF WOODS. [1959] 8p. (21 figs omitted) 26 refs.
Order from SLA mi$1.80, ph$1.80 59-20463

Trans. of Maschinenbau (Germany) 1930, v. 9, no. 11, p. 375-379.

Schwalbe, Carl G. and Beradt, Kurt.
THE HYGROSCOPICITY OF WOODS DRIED IN VARIOUS WAYS. [1959] 14p. (7 figs. 6 tables omitted) 35 refs.
Order from SLA mi$2.40, ph$3.30 59-20455

Trans. of Kolloid-Zeitschrift (Germany) 1931, v. 54 [no. 3] p. 314-326.

MATHEMATICS

AKADEMIYA NAUK SSSR. IZVESTIYA. SERIYA MATEMATICHESKAYA, 1959, V. 23, NO. 3, P. 313-488 (News of the Academy of Sciences of the USSR. Mathematics Series). [1959] [5]p. SOV-38-23-3-(1-6)/6.
Order from OTS $0.50, $3.00/6 mo. PB 141 031T-10
Foreign $0.75, $4.50/6 mo.

Consists of abstracts in English.

GAUSS'S WORK (1803-1826) ON THE THEORY OF LEAST SQUARES, tr. by Hale F. Trotter, Statistical Techniques Research Group. Technical rept. no. 5 on Contract DA 36-034-ORD-2297. Aug 57, 183p. 1 ref.
Order from LC or SLA mi$8.40, ph$28.80 59-12019

Extracts from a French translation by J. Bertrand, pub. 1855.

Contents:
Theory of the combination of observations which leads to the smallest errors (1821-1826), (Theoria combinations observationum erroribus minimis obnoxiae, Werke, vol. 4, p. 1-93)
First part (1821), (Pars prior)
Second part (1823), (Pars posterior)
Supplement (1826), (Supplementum)
Extract (paragraphs 175-186) from Theory of the movement of the heavenly bodies (1809), (Theoria motus corporum coelestium, Werke, vol. 7, p. 240-254)

Extract (paragraphs 13-14) from Discourse on the elements of the orbit of Pallas (1803-1809), (Disquisitiones de elementis ellipticis Pallidis, Werke, vol. 6, p. 20-24)
On the determination of the precision of observations (1816), (Bestimmung der Genauigkeit der Beobachtungen, Werke, vol. 4, p. 109-117)
Application of calculus of probabilities to a problem in practical geometry (1823), (Anwendung der Wahrscheinlichkeitsrechnung auf eine Aufgabe der praktischen Geometrie, Werke, vol. 9, p. 231-237)
On the determination of longitudes by chronometer (1824), (Chronometrische Langenbestimmungen, Astronomische Nachrichten 5: 227, 1824)
(References to Werke are to the edition edited by the Royal Scientific Society of Gottingen)

MATEMATICHESKIY SBORNIK (USSR) 1959, V. 48 (Mathematics Symposium). [1959]
Order from OTS $0.50, $3.00/6 mo.
Foreign $0.75, $4.50/6 mo.

No. 1, p. 3-128, PB 141 033T-22
No. 3, p. 257-395, PB 141 033T-20
No. 4, p. 397-508, PB 141 033T-21

Consists of abstracts in English.

USPEKHI MATEMATICHESKIKH NAUK (USSR) 1959, V. 14, NO. 3, P. 3-235 (Progress of Mathematical Sciences). [1959] 1v. SOV-42-14-3-(1-22)/22.
Order from OTS $0.60, $3.50/year PB 141 036T-9
Foreign $0.85, $5.00/year

Consists of abstracts in English.

Agranovich, Z. S. and Marchenko, V. A.
RE-ESTABLISHMENT OF THE POTENTIAL FROM THE SCATTERING MATRIX FOR A SYSTEM OF DIFFERENTIAL EQUATIONS. [1959] [6]p.
Order from LC or SLA mi$1.80, ph$1.80 59-20208

Trans. of Akademiya Nauk SSSR. Doklady, 1957, v. 113, no. 5, p. 951-954.

A direct solution is given to the inverse problem of the scattering theory for the system of differential equations of the form

$$y_\alpha' + \lambda^2 y_\alpha = \sum_{\beta=1}^{n} v_{\alpha\beta}(x) y_\beta ,$$

where $0 < x < \infty$, and $\alpha = 1, 2, \ldots n$.

Computing Devices

Couffignal.
A NEW CALCULATING MACHINE. [1959] 3p.
Order from SLA mi$1.80, ph$1.80 59-20445

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1930, v. 191, 17 Nov, p. 924-[925].

The characteristic elements of this machine are: a new kind of high speed control gear and a "transcriber".

Kiyasu, Zenichi, Fushimi, Kozuo and others.
PARAMETRIC EXCITATION USING BARRIER CAPACITANCE OF SEMI-CONDUCTOR. [1959] [15]p.
Order from SLA mi$2.40, ph$3.30 59-15691

Trans. of Institute of Electrical Communications Engineers of Japan. Journal, 1957, v. 40, no. 2, p. 162-169.

The analysis, characteristics and experimental results of a new parametron utilizing the non-linear reactance of the barrier capacitance of a semi conductor junction are given. It should be noted that the electric power consumption is extremely small, less than $\frac{1}{100}$ of the power required by the nonlinear magnetic parametron. Excitation frequencies up to 120 Mc have been achieved.

MECHANICS

Dyatlov, A. A., Elin, L. B., and Sukhov, S. A.
PENDULUM TRIBOMETER (FRICTION GAUGE) FOR MEASURING EXTERNAL SLIDING FRICTION. [1959] [12]p. 15 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20569

Trans. of Zavodskaya Laboratoriya (USSR) 1950, v. 16, p. 1108-1111.

Ishlinskiy, A. Yu., Kobrinskiy, A. Ye. and others.
AN EXAMPLE OF BIFURCATION NOT LEADING TO THE APPEARANCE OF UNSTABLE FORMS OF STATIONARY MOTION [AND] A BIOELECTRIC CONTROL SYSTEM. [1959] [13]p. (1 fig. omitted) 5 refs. F-TS-9455/V.
Order from LC or SLA mi$2.40, ph$3.30 59-16057

Trans. of Akademiya Nauk SSSR. Doklady, 1957, v. 117, no. 1, p. 47-49 and 78-80.

Pomey, J. and Voulet, P.
A NEW INSTRUMENT FOR THE MEASUREMENT OF HARDNESS. [1959] 12p. [figs. omitted].
Order from SLA mi$2.40, ph$3.30 59-20853

Trans. of Rev[ue] de Metallurgie (France) 1929, v. 26 [no. 5] p. 238-247.

Siebel, Erich and Pomp, Anton.
TESTING OF THIN SHEETS WITH DEEP-DRAWING-SPREADING TEST. [1959] 7p. (8 tables 16 figs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20477

Trans. of Kaiser-Wil[helm]-Inst[itut] f[ür] Eisenforsch[ung] Dusseldorf. Mitteilungen (Germany) 1930, v. 12, no. 9, p. 115-124.

The results of deep-drawing-spreading experiments on steel sheets and sheets of other metals are presented, and compared with the results of tensile and deepening tests. It was found that the deep-drawing-spreading test affords a good means of comparing different kinds of sheet metal, and furnishes valuable conclusions regarding the nature of the crystal structure of the materials studied. In many cases these methods afford a means for determining the suitability of sheets for deep drawing purposes where other methods fail. (Author)

Votyakov, V. and Shumyatskiy, B.
AERODYNAMIC HEATING (Aerodinamicheskiy Nagrev). 12 Aug 59 [4]p. AF 1255998.
Order from LC or SLA mi$1.80, ph$1.80 59-19714

Trans. from Sovetskaya Aviatsiya (USSR) 1959, 14 Apr, p. 2.

Vuskovic, I.
EXPERIMENTS ON THE INFLUENCE OF AIR CONTENT ON CAVITATION AND CORROSION, IN THE CASE OF WATER FLOW, tr. by M. G. Harris. [1959] 10p. R. T. P. Trans. no. 2387.
Order from SLA mi$1.80, ph$1.80 59-17716

Trans. of [Escher Wyss News] (Switzerland) 1940, v. 13, p. 83-90.

Experiments show that there is a great difference between air separation and formation of vapour bubbles Air separation appears in the flow very much earlier and with a noticeably greater static pressure (which corresponds as a first approximation to the air saturation pressure) than the formation of vapour bubbles, i. e.; the beginning of true cavitation. Further tests have shown that increase of the air content in water lessens the corrosive action.

Statics, Kinematics, and Kinetics

Mal'kin, I. G.
SOME PROBLEMS IN THE THEORY OF NONLINEAR OSCILLATIONS. BOOKS 1, 2. Aug 59, 2v.
Order from OTS $3.00/2 books AEC-tr-3766

Trans. of mono. Nekotoryye Zadachi Teorii Nelineynykh Kolebanii, Moscow, 1956, chap. 1-3, 4-8.

Discussions are presented on the theory of periodic and almost periodic oscillations of quasilinear systems with one and several degrees of freedom, the theory of periodic and almost periodic oscillations of systems approximating arbitrary nonlinear systems, and the theory of free and forced oscillations (periodic and almost periodic) of quasiharmonic systems, i. e., systems described by linear differential equations with periodic coefficients. Practical procedures are presented for applying the small-parameter method of Poincaré to compute the oscillations. One chapter is devoted to stability of oscillations. All the methods discussed are accompanied by examples with detailed computations. (See also 59-12410)

Mitropol'skiy, Yu. A.
NONSTATIONARY PROCESS IN NONLINEAR OSCILLATORY SYSTEMS. CHAP. I-II. [1959] [147]p. F-TS-9085/V.
Order from LC or SLA mi$7.20, ph$22.80 59-19504

Trans. of mono. Nestatsionarnyye Protsessy v Nelineynykh Kolebatel'nykh Sistemakh Kiev, 1955, chap. 1-2, p. 7-108.

This book is devoted to a study of nonstationary states in nonlinear oscillatory systems with slowly varying parameters. The methods developed permit solution of problems relating to unsteady oscillations of rotors on elastic bearings, vibrations of mine elevator cables, various unsteady states in starting and stopping motors, and oscillations in circuits with variable capacitance and self-inductance. They permit the investigation of a number of problems involving unstable states in gyroscopic systems and accelerating devices, and of other physical and technological problems. Part 2 (59-19505 below) relates to nonstationary processes in nonlinear oscillatory systems with one or more degrees of freedom.

Mitropol'skiy, Yu. A.
NONSTATIONARY PROCESS IN NONLINEAR OSCILLATORY SYSTEMS. CHAP. III-IV. [1959] [248]p. F-TS-9085/V.
Order from LC or SLA mi$11.10, ph$37.80 59-19505

Trans. of mono. Nestatsionarnyye Protsessy v Nelineynykh Kolebatel'nykh Sistemakh, Kiev, 1955, chap. 3-4, p. 109-283.

For abstract see 59-19504 above.

METALLURGY

AKADEMIYA NAUK SSSR. OTDELENIYE TEKHNICHESKIKH NAUK, IZVESTIYA: METALLURGIYA I TOPLIVO 1959, NO. 2, P. 3-176 (News of the Academy of Sciences of the USSR. Department of Technical Sciences, Metallurgy and Fuel). [1959] 1v. SOV-180-59-2-(1-34)/34.
Order from OTS $1.00, $5.50/6 mo. PB 141 019T-12
Foreign $1.25, $7.00/6 mo.

Consists of abstracts in English.

KOKS I KHIMIYA (USSR) 1959, NO. 5, P. 3-64
(Coke and Chemistry). [1959] [22]p. SOV-68-59-5-(1-25)/25.
Order from OTS $0.50, $3.00/6 mo. PB 141 063T-17
Foreign $0.75, $4.50/6 mo.

Consists of abstracts in English.

NAUCHNYYE DOKLADY VYSSHEY SHKOLY. METALLURGIYA (USSR) 1959, NO. 2, P. 5-263
(Scientific Reports of Higher Schools, Metallurgy). [1959] 1v. SOV-163-59-2-(1-48)/48.
Order from OTS $0.90, $3.50/year PB 141 133T-6
Foreign $1.15, $4.50/year

Consists of abstracts in English.

SPECIAL ALLOYS (CONTINUATION). [1959] [15]p. (3 figs. 3 tables omitted) 12 refs.
Order from SLA mi$2.40, ph$3.30 59-20479

Trans. in rough draft of Giesserei Zeitung (Germany) 1930, v. 27, no. 14, p. 388-391 and no. 19, p. 541-544.

Furs, B. A.
A METHOD FOR MEASURING THE TEMPERATURES OF BODIES ROTATING AT HIGH SPEEDS (Metodika Izmereniya Temperatury Tel, Vrashchayushchikhs'ya s Vysokimi Skorostyami). Feb 58 [4]p. 3 refs. C. T. S. 420.
Order from LC or SLA mi$1.80, ph$1.80 59-19620

Trans. of Liteynoye Proizvodstvo (USSR) 1956, no. 12, p. 19-20.

Direct temperature measurement are proposed by means of thermocouples installed in the wall of the rotating mould and connected to a brush commutator which allows the thermal e. m. f. to be passed to or cut off from the indicator or recording appliances.

Glembotskiy, V. A.
DURATION OF AIR-BUBBLE ATTACHMENT TO MINERAL PARTICLES IN THE FLOTATION PROCESS, AND ITS MEASUREMENT (Vremya Prilipaniya Vozdushnykh Puzyr'kov k Mineral'nym Chastitsam pri Flotatsii i Yego Izmereniye). [1959] [11]p. 1 ref.
Order from LC or SLA mi$2.40, ph$3.30 59-18544

Trans. of Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk. Izvestiya, 1953, no. 11, p. 1524-1531.

Knoops, Fr.
ELECTRIC HEATING IN THE LIGHT METAL INDUSTRY. [1959] 12p. (21 figs. omitted) 3 refs.
Order from SLA mi$2.40, ph$3.30 59-20657

Trans. of Metall und Erz (Germany) 1937, v. 34, [no. 17] p. 453-460.

Electric heat is being used in the field of light metals for melting and for further working. For melting, resistance furnaces, low frequency furnaces and high frequency furnaces are used. The course of the heating in graphite and metal crucibles is compared and operating data given for melting furnaces. Advantages and disadvantages of low frequency furnaces are listed and a low frequency furnace of Ugine-Infra is described. The high frequency furnaces are briefly described and the advantages of electric furnaces in the foundry are summarized. The ingots and castings are usually subjected to further treatment. The heat treatment consists of the following stages: heat treating, quenching and aging. The necessity of maintaining a precise temperature control is especially emphasized. Resistance furnaces of greatly varying design with and without air circulation as well as salt baths are used. In conclusion are given curves and a description of the effect of the use of electric heat on the load curves of several plants. (Author)

Molner, Alfred.
STUDY OF THE HARDENING OF LEAD, TIN, CADMIUM, AND ZINC, AT VARIOUS TEMPERATURES. [1959] 7p. (9 figs. 33 tables refs. omitted).
Order from SLA mi$1.80, ph$1.80 59-20433

Trans. of Revue de Métallurgie (France) 1930, v. 27, no. 10, p. 522-534.

Portevin, Albert and Chatelier, Francois le.
HOT COMPRESSION AND EXTRUSION TESTS FOR METALS AND ALLOYS. [1959] 2p.
Order from SLA mi$1.80, ph$1.80 59-20443

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1929, v. 189, 29 July, p. 248-250.

Stomeyer, M.
TEMPERATURE DETERMINATIONS WITHOUT MEASURING INSTRUMENTS IN FOUNDRY MELTING PRACTICE. [1959] 5p.
Order from SLA mi$1.80, ph$1.80 59-20905

Trans. of Giessereipraxis (Germany) 1930, v. 51, no. 42, p. 170-172.

Suhr, M. J.
HEAT TREATMENT IS INDISPENSABLE FOR ALUMINUM AND ALUMINUM ALLOYS. [1959] 10p. [5 figs. omitted].
Order from SLA mi$1.80, ph$1.80 59-20454

Trans. of Revue de Métallurgie (France) 1930, v. 27, no. 10, p. 563-569.

Thews, E[dmund] R[ichard].
ALLOYS. [1959] 38p. 43 refs.
Order from SLA mi$3.00, ph$6.30 59-20480

Trans. of Giesserei-Zeitung (Germany) 1929, v. 26, no. 16, p. 450-455; 1930, v. 27, no. 1, p. 14-18, no. 8, p. 221-224 and 1930, v. 27] no. 12, p. 328-330.

This compilation appears to be part of a comprehensive listing of over 3000 alloys "known to the practical man only by name". The alloys here discussed are listed alphabetically, from "A" Aluminum alloy through Argentan.

Ferrous Metals

*STAL (USSR) 1959 [V. 19] NO. 6, P. 481-575 (Steel). [1959] 1v. SOV-133-59-6-(1-41)/41.
Order from OTS $0.70, $4.00/6 mo. PB 141 136T-16
Foreign $0.95, $5.50/6 mo.

Consists of abstracts in English.

Apayev, B. A.
THE INTERMEDIATE CARBIDE PHASES, Fe_xC, IN TEMPERING STRUCTURES. [1959] [10]p. 29 refs.
Order from LC or SLA mi$1.80, ph$1.80
59-18346

Trans. of Zhurnal Tekhnicheskoy Fiziki (USSR) 1953, v. 23, no. 7, p. 1192-1201.

Magnetic data show that an intermediate carbide Fe_xC is formed during tempering. The Curie point A_x and its displacement with increasing tempering temperatures cannot be explained by changes in grain size of cementite. The phase changes in the third stage of tempering are not fully explained as yet and require further investigation. (Authors conclusions)

Buchholz, H[erbert] and Bühler, H[ans].
COMPARISON OF THE METHODS FOR DETERMINING RESIDUAL STRESSES IN SOLID CYLINDERS (Vergleich der Verfahren zur Bestimmung von Eigenspannungen in Volizylindern). [1959] [6]p. 12 refs.
Order from SLA mi$1.80, ph$1.80 59-20592

Trans. of Stahl und Eisen (Germany) 1932, v. 52, no. 20, p. 490-492.

Buchholz, H[erbert] and Bühler, H[ans].
INFLUENCE OF TEMPERING TEMPERATURE AND DURATION UPON THE RESIDUAL STRESSES IN THE HEAT TREATMENT OF STEEL (Einfluss von Anlasstemperatur und -dauer auf die Eigenspannungen bei der Warmebehandlung von Stahl). [1959] 8p. (7 figs. 5 tables omitted) 6 refs. TRB no. 24.
Order from SLA mi$1.80, ph$1.80 59-20597

Trans. of Archiv für das Eisenhüttenwesen (Germany) 1932, v. 6, no. 6, p. 247-251.

Buchholz, H. and Bühler, H.
RELATION BETWEEN THERMAL STRESSES AND STRENGTH PROPERTIES OF STEEL (Zusammenhang Zwischen Waermespannungen und Festickeitseigenschaften von Stahl). [1959] [12]p. 16 refs. TRB no. 26.
Order from SLA mi$2.40, ph$3.30 59-20590

Trans. of Archiv für das Eisenhuttenwesen (Germany) 1933, v. 6, no. 8, p. 335-340.

Buchholz, Herbert and Bühler, Hans.
RESIDUAL STRESSES IN HEAT TREATED HOLLOW STEEL CYLINDERS (Eigenspannungen in Wärmebehandelten Hohlzylindern aus Stahl) tr. by J. L. Maulbetsch. [1959] [12]p. 6 refs. (foreign text included).
Order from SLA mi$2.40, ph$3.30 59-20591

Trans. of Archiv für das Eisenhüttenwesen (Germany) 1933, v. 7, no. 5, p. 315-317.

Bühler, H[ans] and Scheil, E[rich].
COMBINED EFFECT OF THERMAL AND TRANSFORMATION STRESSES IN QUENCHED STEEL (Zusammenwirken von Wärme- und Umwandlungsspannungen in Abgeschreckten Stählen). [1959] [10]p. 14 refs.
Order from SLA mi$1.80, ph$1.80 59-20822

Trans. of Archiv für das Eisenhüttenwesen (Germany) 1933, v. 6, no. 7, p. 283-288.

Bühler, Hans, Buchholz, Herbert, and Schulz, Ernest Hermann.
RESIDUAL STRESSES IN THE HEAT-TREATMENT OF STEEL (Eigenspannungen bei der Warmebehandlung von Stahl). [1959] [11]p. 8 refs. TRB no. 36.
Order from SLA mi$2.40, ph$3.30 59-20595

Trans. of Archiv für das Eisenhüttenwesen (Germany) 1932, v. 5, no. 8, p. 413-418.

Bühler, H[ans] and Scheil, E[rich].
EFFECT OF QUENCHING CONDITIONS UPON THE RESIDUAL STRESSES IN STEELS (Einfluss der Abschreckbedingungen auf die Eigenspannungen von Stählen). [1959] [9]p. (1 table omitted) 7 refs. TRB no. 37.
Order from SLA mi$1.80, ph$1.80 59-20596

Trans. of Archiv für das Eisenhüttenwesen (Germany) 1933/34, v. 7, no. 6, p. 359-363.

Carlini, Alessandra.
NON-METALLIC INCLUSIONS IN ACID OPEN-HEARTH STEEL (Inclusioni non Metalliche nell'Acciaio Fabbricato al Forno Martin-Siemens Acido). [1959] 42p. (132 figs. omitted) 31 refs.
Order from SLA mi$3.30, ph$7.80 59-20561

Trans. of la Metallurgia Italiana, 1950, v. 42, no. 12, p. 435-456.

Gautschi, R[udolf] and Marincek, B[orut].
THE SURFACE TENSION OF CAST IRON TREATED WITH CERIUM. 1 June 55, 7p. (2 figs. 4 tables 10 refs. omitted)
Order from SLA mi$1.80, ph$1.80 59-20921

Trans. of Giesserei (West Germany) 1955 [v. 42] no. 6, p. 121-123.

Various cast iron melts were treated with cerium in order to obtain their graphite in nodular form. The surface tension was measured by the capillary depression method before and after the treatment. After the treatment there always was an increase in the surface tension; in the most favorable cases this increase was about 50%. Parallel to this there was a change in the graphite separation similar to that determined by K. Grutter and B. Marincik with Mg-treated pig iron melts, namely that at a 50% increase in the surface tension modules appeared. The increase in the surface tension corresponds to a decrease in the S content. These surface tension measurements can only be repeated under a very careful observation of definite conditions. The spread is about 5%. Therefore it can be assumed that the surface tension reflects very exactly the slightest changes in the cast iron melt. (Author's summary)

Gentner, F.
FAVORABLE RESIDUAL COMPRESSIVE STRESSES IN NITRIDED LAYERS (Guenstige Druckeigenspannungen im Nitrierschichten). [1959] [5]p. 5 refs. TRB no. 122.
Order from SLA mi$1.80, ph$1.80 59-20584

Trans. of Technische Mitteilungen Krupp (Germany) 1937, v. 5, no. 1, p. 19-21.

Körber, Friedrich and Pomp, Anton.
THE DETERMINATION OF THE HOT YIELD POINT OF STEEL. [1959] 6p. (11 figs. 2 tables omitted) 12 refs.
Order from SLA mi$1.80, ph$1.80 59-20476

Trans. of Kaiser-Wilhelm-Institut f[ür] Eisenforschung, Dusseldorf. Mitt[eilungen] (Germany) 1930, v. 12, no. 12, p. 165-169.

The directions for the determination of the yield point at high temperatures are described and the influence of the experimental procedure, such as length of the delay at the peak-load in the individual stages of loading, number of the stages of loading up to the obtaining of the yield point and delay after the loading on the result of the yield point determination, are clearly proved on the basis of experiments on a soft ingot steel. (Author)

Krautkramer, Herbert.
ULTRASONIC INSPECTION OF SEMI-MANUFACTURATE IN THE STEEL INDUSTRY, tr. by Karl Demrick. [1959] 13p.
Order from SLA mi$2.40, ph$3.30 59-20562

Trans. of Teknisk Tidskrift (Sweden) 1955 [v. 85, no. 20] p. 457-461.

Locati, L. and Ferro, A.
RESIDUAL STRESSES IN SURFACE HARDENING PROCESSES (Le Tensioni Intern nei Processi di Tempra Superficiale). [1959] [36]p. 9 refs.
Order from SLA mi$3.00, ph$6.30 59-20844

Trans. of la Metallurgia Italiana, 1950, v. 42, no. 1, p. 22-29.

Mailänder, R[ichard].
COMPARATIVE TESTS ON SMALL NOTCH-IMPACT SPECIMENS WITH VARIOUS NOTCH DEPTHS AND DIAMETERS. [1959] 8p. (3 figs. 7 tables omitted) 8 refs.
Order from SLA mi$1.80, ph$1.80 59-20409

Trans. of Arch[iv] f[ür das] Eisenhüttenwesen (Germany) 1936 [v. 10, no. 2] p. 53-58.

Mailänder, R[ichard].
RESIDUAL STRESSES AND THE ALTERNATING BENDING STRENGTH OF NITRIDED STEEL SPECIMENS (Eigenspannungen und Biegewechselfestigkeit Verstickter Stahlproben). [1959] 9p. 10 refs. TRB no. 191.
Order from SLA mi$1.80, ph$1.80 59-20570

Trans. of Archiv für das Eisenhüttenwesen (Germany) 1936, v. 10, no. 6, p. 257-261.

P[errin] Rene.
DESILICONIZATION AND DESULFURIZATION OF CAST IRON BY MEANS OF A SINGLE SLAG. 6 Jan 55, 2p.
Order from SLA mi$1.80, ph$1.80 59-20930

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1954, v. 239 [no. 17] p. 1042-1043.

Piwowarsky, E.
IMPACT STRENGTH AND NOTCH SENSITIVITY OF CAST IRON. [1959] 21p. (23 figs. 5 tables omitted) 21 refs.
Order from SLA mi$2.70, ph$4.80 59-20438

Trans. of Giesserei (Germany) 1936, v. 23 [no. 26] p. 674-685.

Piwowarsky, E.
PRESENT STATUS OF THE SUPERHEATING OF MELTS OF CAST IRON. [1959] 15p. (17 figs. refs. footnotes omitted).
Order from SLA mi$2.40, ph$3.30 59-20439

Trans. of Giesserei (Germany) 1937 [v. 24, no. 21] p. 510-518.

Schmidt, Max.
INFLUENCE OF THE DEGREE OF FORGING AND QUENCHING AND TEMPERING UPON THE ALTERNATING BENDING STRENGTH OF DIFFERENTLY

ALLOYED CONSTRUCTIONAL STEELS (Einfluss des Verschmiedungsgrades und der Vergütung auf die Beigewechselfestigkeit Verschieden Legierter Baustähle). [1959] [11]p. (1 table omitted) 10 refs. TRB no. 281.
Order from SLA mi$2.40, ph$3.30 59-20574

Trans. of Archiv für das Eisenhüttenwesen (Germany) 1938, v. 11, no. 8, p. 393-400.

Staudinger, H.
ALTERNATING BENDING STRENGTH OF CASE HARDENED AND NITRIDED STEELS WITH GRINDING CRACKS (Biegewechselfestigkeit Einsatzgehärteter und Nitrierter Stähle mit Schleifrissen). [1959] [12]p. (2 tables omitted) 15 refs.
Order from SLA mi$2.40, ph$3.30 59-20576

Trans. of V[erein] D[eutscher] I[ngenieure]. Zeitschrift (Germany) 1944, v. 88, no. 51/52, p. 681-686.

Strandell, P. O. and Leufven, A.
CALCULATION OF ROLLING-PRESSURE AT COLD-ROLLING OF STRIP-STEEL, tr. by Carl Demrick. 12 June 53, 13p. (7 figs. 3 equations refs. omitted).
Order from SLA mi$2.40, ph$3.30 59-20564

Trans. of Jernkontoret [Stockholm]. Annaler (Sweden) 1953, v. 137, no. 3, p. 100-114.

Thanheiser, Gustav and Massen, Gerd.
THE USE OF THE POLAROGRAPH IN FERROUS METALLURGICAL LABORATORIES. I. THE DETERMINATION OF COPPER, NICKEL AND COBALT IN THE PRESENCE OF EACH OTHER IN STEELS. [1959] 31p. 21 figs. 12 tables, footnotes [summary] omitted).
Order from SLA mi$3.00, ph$6.30 59-20473

Trans. of Kaiser-Wilhelm-Institut f[ür] Eisenforsch[ung] Dusseldorf. Mitt[eilungen] (Germany) 1937, v. 19 [no. 2] p. 27-46.

Light Metals

LIGHT ALLOYS. PT. 1. [1959] [233]p. 74 refs. F-TS-9542/V, pt. 1.
Order from LC or SLA mi$9.60, ph$33.30 59-19774

Trans. of mono. Lehkiye Splavy, Moscow, 1958, p. 1-146.

The principal papers of the second All-Union Conference on Light Alloys (1955) as well as some of the discussions which followed presentation of the papers, comprise this book which covers questions relating to the development of new light alloys, the technology of production of semifinished parts, and the development of pressure shaping. (See also 59-19775 and 59-19776 below)

LIGHT ALLOYS. PT. 2. [1959] [233]p. 85 refs. F-TS-9542/V, pt. 2.
Order from LC or SLA mi$10.20, ph$36.30 59-19775

Trans. of mono. Lehkiye Splavy, Moscow, 1958, p. 147-310.

For abstract see 59-19774 above.

LIGHT ALLOYS. PT. 3. [1959] [266]p. 50 refs. F-TS-9542/V, pt. 3.
Order from LC or SLA mi$11.10, ph$41.10 59-19776

Trans. of mono. Lehkiye Splavy, Moscow, 1958, p. 311-500.

For abstract see 59-19774 above.

THE PRODUCTION OF DENSE ALUMINIUM BRONZES. 1938, 6p. (3 figs. 2 tables omitted) 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20906

Trans. of Giessereipraxis (Germany) 1937 [v. 58] 28 Mar, p. 136-140.

Haessner, F[rank] and Lücke, K[urt].
THE RATE OF NUCLEATION AND GROWTH IN THE RECRYSTALLIZATION OF PURE ALUMINUM. 27 May 55, 19p. (15 figs. 4 tables refs. omitted).
Order from SLA mi$2.40, ph$3.30 59-20925

Trans. of Z[eitschrift für] Metallk[un]de (West Germany) 1955, v. 46, no. 2, p. 110-118.

Nonferrous (except light) Metals

TSVETNYYE METALLY (USSR) 1959 [V. 32] (Nonferrous Metals). [1959]
Order from OTS $0.60, $3.50/6 mo.
Foreign $0.85, $5.00/6 mo.

No. 5, p. 1-95, PB 141 139T-17
No. 6, p. 1-103, PB 141 139T-18

Consists of abstracts in English.

Garre, B. and Müller, A.
STUDIES ON LEAD ALLOYS. [1959] 6p. (22 figs. 1 table omitted) 4 refs.
Order from SLA mi$1.80, ph$1.80 59-20450

Trans. of Z[ei]tschr[ift] f[ür] Anorg[anische] Chemie (Germany) 1931, v. 198, no. 3, p. 297-309. Another translation is available from SLA mi$1.80, ph$1.80 as 59-15444 [1959] 7p.

Structural Metallurgy and Corrosion

Beroujon, J., Englander, M., and others.
ON THE GRAIN REFINING OF URANIUM, tr. by Liz Appleby. Jan 59 [21]p. 3 refs.
Order from LC or SLA mi$2.40, ph$3.30 AEC-tr-3564

Trans. of C[ommissariat a l']E[nergie] A[tomique. Rapport] (France) 1957, no. 694.

In cases in which the geometrical dimensions of the extruded uranium cannot be modified, it is possible to give a certain refining to the grains, thanks to variations of the microstructure during allotropic transformations. When the geometrical dimensions of the extruded uranium can be modified to a certain extent, a very extensive grain refining can be realized by recrystallization after cold-hardening. The deformation rate imposed on the extruded uranium rods should be greater than the corresponding value of critical cold-hardening, that is to say practically 12%. A homogeneous microstructure consisting of equiaxial grains with an average diameter of 15 μ is obtained by holding the specimen for one hour at a temperature between 500 and 550°C; the extruded metal undergoes a reduction rate of 20 to 50%. This treatment, applied to rods with diameters near those which would be used in the reactors, and cold-hardened by the rotating hammer, has led to a very satisfactory refining of the grain.

Josso, E[mile].
THE BRITTLENESS OF Fe-Cr ALLOYS AT 475°C. 4 Apr 55, 2p. (2 figs. omitted) 5 refs.
Order from SLA mi$1.80, ph$1.80 59-20928

Trans. of [Academie des Sciences, Paris]. Comptes Rendus. (France) 1955, v. 240 [no. 7] p. 776-778.

Lozinskiy, M. G.
HIGH-TEMPERATURE METALLOGRAPHY PT. 1 [1959] [243]p. F-TS-9420/V.
Order from LC or SLA mi$11.10, ph$37.80 59-19769

Trans. of mono. Vysokotemperaturnaya Metallografiya, Moscow, 1956, p. 1-153.

This book is described as a first attempt at a systematic exposition of high-temperature metallography. It is intended for scientific and engineering personnel of research and educational institutions and of plant laboratories, engaged in the study of the temperature relationships of the microstructure and properties of metals and alloys on heating, isothermal annealing, and cooling. It is suggested that the book may also be of value to students of advanced courses in machine-building. (See also 59-19770 and 59-19771).

Lozinskiy, M. G.
HIGH-TEMPERATURE METALLOGRAPHY. PT. 2. [1959] [183] p. F-TS-9420/V.
Order from LC or SLA mi$8.40, ph$28.80 59-19770

Trans. of mono. Vysokotemperaturnaya Metallografiya, Moscow, 1956, p. 154-216.

Continuation of 59-19769 above. (See also 59-19771)

Lozinskiy, M. G.
HIGH-TEMPERATURE METALLOGRAPHY. PT. 3. [1959] [193]p. 285 refs. F-TS-9420/V.
Order from LC or SLA mi$8.70, ph$30.30 59-19771

Trans. of mono. Vysokotemperaturnaya Metallografiya, Moscow, 1956, p. 217-312.

See also 59-19769 and 59-19770 above.

Platon, J. G.
A DIRECT CAUSE OF FLAKING. [1959] [25]p. 2 refs.
Order from SLA mi$2.70, ph$4.80 59-20796

Trans. of Rev[ue] de Métallurgie (France) 1950, v. 47 [no. 11] p. 856-862.

Riederer, Karl.
THE SYSTEM ALUMINIUM-MAGNESIUM-ZINC. [1959] 11p. (7 figs. 4 tables omitted) 11 refs.
Order from SLA mi$2.40, ph$3.30 59-20349

Trans. of Z[ei]ts[chrift] f[ür] Metallkunde (Germany) 1936 [v. 28, no. 10] p. 312-317.

NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY

ATOMNAYA ENERGIYA (USSR) 1958, SUPPL. NO. 5 (Atomic Energy. Supplement). [1959] [8]p. SOV-89S-58-5-(1-4)/4.
Order from OTS $0.60, $3.50/6 issues PB 141 082T-17S
Foreign $0.85, $5.00/6 issues

Consists of abstracts in English.

Görlich, P., Krohs, A. and others.
ON RESOLVING POWER OF SCINTILLATION MULTIPLIERS AND EFFECT OF VARIOUS PARAMETERS ON IT, tr. by Lydia Venters. Dec 58, 14p. 15 refs.
Order from LC or SLA mi$2.40, ph$3.30 AEC-tr-3532

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1958, v. 10, no. 7, p. 303-309.

Calculations are reported which show that the resolution of a scintillation multiplier can be improved by the proper selection of the parameters which are

essential for energy measurements. Linearity measurements, measurements on the uniformity of the photocathodes, and measurements which prove the resolution limitation of a scintillation counter due to the properties of the scintillation crystal are reported.

Perel'man, R. G.
NUCLEAR ENGINES. 1959 [66]p. 23 refs. F-TS-9706/V.
Order from LC or SLA mi$3.90, ph$10.80 59-19494

Trans. of mono. Yadernyye Dvigateli, Moscow, 1958. Another translation is available from OTS $1.75 as 59-11918 [1959] 63p.

Contents:
The engine of the future
Over nine seas
Eighty thousand kilometers under the sea
The locomotive of the deserts, cross-country roads, and mountain passes
On the superhighway of the atomic age
Around the globe
The atom gets its wings
Nuclear rockets
Conclusion
Bibliography

Elementary Particles

Kopylov, G. I.
ON AN ESTIMATE OF THE NUMBER OF SECONDARY PARTICLES NEAR CRITICAL ANGLES, tr. by Lydia Venters. Nov 58, 26p. 4 refs. P-166.
Order from LC or SLA mi$2.70, ph$4.80 AEC-tr-3565

Trans. of mono. Ob Otsenke Chisla Vtorichnykh Chastits Bliz Predel'nykh Uglov, Moscow, 1958, p. 1-30.

A review of known equations and graphical methods describing the kinematics of the two-particle decay in the laboratory system is given. Equations are derived which characterize in detail the two-particle decay of an equal mass, and approximate equations for the extreme angles during the decay of the particles of a nonequal mass. The graphical method for evaluation of the quantity of particles in the given interval of angles and energies is presented. An approximate equation for the evaluation of the number of particles directed at the angles near the most probable ones is suggested. The graphical method and the use of the coefficient $dn/\sqrt{d\sigma}$ may essentially facilitate the additional computations inevitable in the first stage of the preparation of the experiment.

Markov, M. A.
HYPERONS AND K-MESONS. PT. I. GENERAL CHARACTERISTICS OF HYPERONS AND K-MESONS. PT. II. ISOTOPIC SPIN AND SYSTEMATICS OF FUNDAMENTAL PARTICLES. PT. III. INTERACTIONS BETWEEN FUNDAMENTAL PARTICLES AND DIFFICULTIES OF THE THEORY. Apr 59, 162p. 329 refs.
Order from OTS $5.00 AEC-tr-3591

Trans. of mono. Giperony i K-Mesony, Chast 1-3, Moscow, 1957.

Contents:
General characteristics of hyperons and K-mesons.
Isotopic spin and systematics of fundamental particles.
Interactions between fundamental particles, and difficulties of the theory.

PERSONNEL SUPPLIES AND PERSONAL EQUIPMENT

Hoffman, Ewald.
ON THE SIGNIFICANCE OF THE HEEL (OF THE SHOE). Doctoral thesis. [1959] [9]p. (3 figs. omitted) ARF Trans. 245.
Order from SLA mi$1.80, ph$1.80 59-20698

Trans. of mono. Uber die Bedeutung des Absatzes.

PHYSICS

AKADEMIYA NAUK ARMYANSKOY SSR, YEREVAN. IZVESTIYA. SERIYA FIZIKO-MATEMATICHESKIKH NAUK, 1959, VOL. 12 (News of the Academy of Sciences of the Armenian SSSR. Physico-mathematical Series). [1959]
Order from OTS $0.50, $3.00/6 mo.
Foreign $0.75, $4.50/6 mo.

No. 1, p. 3-102, PB 141 017T-7
No. 2, p. 3-134. PB 141 017T-6

Consists of abstracts in English.

*AKADEMIYA NAUK SSSR. IZVESTIYA. SERIYA FIZICHESKAYA, 1959, V. 23 (News of the Academy of Sciences of the USSR, Physics Series). [1959]
Order from OTS $0.80, $4.50/6 mo.
Foreign $1.05, $6.00/6 mo.

No. 4, p. 426-536, PB 141 041T-18
No. 6, p. 670-779, PB 141 041T-17

Consists of abstracts in English.

*AKUSTICHESKIY ZHURNAL (USSR) 1959, V. 5, NO. 2, P. 131-260 (Journal of Acoustics). [1959] 1v. SOV-46-5-2-(1-34)/34.
Order from OTS $0.60, $2.25/year PB 141 039T-7
Foreign $0.85, $3.25/year

Consists of abstracts in English.

REFERATIVNYY ZHURNAL. FIZIKA (USSR) 1959, NO. 6, Abstracts 12151-14447 (Soviet Abstracts. Physics). 20 Oct 59, 157p. JPRS: 1958-N.
Order from OTS $1.00 59-13958

Complete translations of those entries which were originally published in the Sino-Soviet bloc and in Yugoslavia.

Bol'shov, V. G.
AN INVESTIGATION OF THERMOELECTRON EMISSION IN THE TRANSITION FROM SOLID TO LIQUID STATE (Issledovaniye Termoelektronnoy Emissii pri Perekhode iz Tverdogo v Zhidkoye Sostayaniye). Dec 57 [14]p. 18 refs. C. T. S. no. 360.
Order from LC or SLA mi$2. 40, ph$3. 30 59-18517

Trans. of *Zhurnal Tekhnicheskoy Fiziki (USSR) 1956, v. 26, no. 6, p. 1150-1162.

The thermoemission current is measured for Cu, Ag and Ge in the solid and liquid states. After taking steps to minimize the discontinuity of the thermoemission current at the melting point, it is shown that there is a change of slope at the melting point when the thermoemission is plotted on a temperature base. The true power output does not change when the material changes from one state to another; the temperature coefficient of power output changes suddenly. The absence of the discontinuity in the thermoemission current is explained by the gradual reconstruction of the atoms at the surface of the emitter as the temperature increases, and the absence of a sudden reconstruction of surface as the melting point is reached. The power outputs for Cu and Ag, determined by experiment, agree well with the results of previous investigators, but the power output for Ge differs essentially from the value given by other authors and is dependent upon temperature. (Author)

Bouwkamp, C. J.
THEORY OF MULTIPOLES, THE ANTENNA AND THE DIFFRACTION OF WAVES. [1959] 69p. 14 refs.
Order from SLA mi$3. 90, ph$10. 80 59-20501

Trans. of unidentified mono., Rome, 1957.

Topics considered include (1) a series expansion in multipoles of the electromagnetic field radiated by given sources, (2) some aspects of the elementary theory of the antenna, (3) the problem of optimum distribution of current in an antenna, (4) the theory of spheroidal functions, (5) theory of diffraction of scalar waves by a circular hole, (6) the problem of singularities on the screen's boundary, and (7) on the diffraction of electromagnetic waves by a circular screen.

Electricity and Magnetism

Blondel, A.
EXPERIMENTAL RESEARCHES ON THE ALTERNATING-CURRENT AEC PTS. 4-6. [1959] 14p. (3 figs. omitted) 3 refs.
Order from SLA mi$2. 40, ph$3. 30 59-20524

Trans. of la Lumière Électrique (France) 1891, v. 42 [no. 52] p. 618-624.

Simms, Thomas S. (ed.)
THE CHARACTERISTICS OF METAL OXIDE MAGNETS, tr. by Charles Pang. [1959] [18]p. 4 refs.
Order from SLA mi$2. 40, ph$3. 30 59-20943

Trans. of [Denki Gakkai Zasshi] (Japan) 1933, v. 53, p. 408-412.

Zayev, N.
ELECTRETS: ELECTRIC ANALOGS OF THE MAGNETS (Elektrety: Elektricheskiye Bliznetsy Magnitov). 17 Sep 59 [4]p. AF 1256095.
Order from LC or SLA mi$1. 80, ph$1. 80 59-19694

Summary trans. of Tekhnika Molodezhi (USSR) 1959 [v. 27] no. 3, p. 37-39.

After a theoretical explanation of the electret structure, its analogy to a permanent magnet, and ability to accumulate electric energy, the author gives some information on recent achievements in this field and on the practical use of the "electrets" in modern life.

Molecular Physics and Spectroscopy

*OPTIKA I SPEKTROSKOPIYA (USSR) 1959, V. 7, NO. 1, P. 3-136 (Optics and Spectroscopy). [1959] 1v. SOV-51-7-1-(1-27)/27.
Order from OTS $0. 70, $4. 00/6 mo. PB 141 047T-18
Foreign $0. 95, $5. 50/6 mo.

Consists of abstracts in English.

Barchukov, A. I., Murina, T. M., and Prokhorov, A. M.
MICROWAVE SPECTRUM AND ROTATIONAL CONSTANTS OF THE C_2H_5Cl MOLECULE. [1959] 2p. [1 fig. omitted] 3 refs.
Order from LC or SLA mi$1. 80, ph$1. 80 59-20860

Trans. of Opt[ika] i Spekt[roskopiya] (USSR) 1958, v. 4 [no. 4] p. 521-[523].

Solid State Physics

*KRISTALLOGRAFIYA [MOSCOW] (USSR) 1959, VOL. 4, NO. 2, P. 143-276 (Crystallography). [1959] 1v. SOV-70-4-2-(1-36)/36.
Order from OTS $0. 70, $4. 00/year PB 141 065T-8
Foreign $0. 95, $5. 50/year

Consists of abstracts in English.

PROCESS FOR MANUFACTURING CRYSTALLINE SILICON OF HIGH PURITY. [18 Oct 59] 10p.
Order from RIS $20.00 RIS rept. 97050

Trans. of German patent application P 17 938 (12i/38) DAS 1 054 436, by Pechiney Compagnie de Produits Chimiques et Electrométallurgiques, Paris, filed 11 Feb 57, pub. 9 Apr 59.

A process is given for manufacturing compact silicon of high purity by multistage thermal splitting of a previously purified silane compound diluted, if necessary, with an inert gas. The process is characterized in that the starting material is a trichlorosilane ($SiHCl_3$) obtained in conventional manner from the reaction of hydrogen chloride upon an Si-Cu alloy at approximately 220°C, the starting material being first purified by double distillation in boron-glass vessels, then conducted to the first decomposition area at a temperature of 800° -900°C for the removal of further impurities together with some of the silicon, and then to the second area heated to at least 950°C, where the pure silicon is obtained from the completely purified trichlorosilane.

Andrianov, K. A.
SYNTHETIC HIGH MOLECULAR COMPOUNDS AS DIELECTRICS. [1959] 24p. (incomplete).
Order from LC or SLA mi$2.70, ph$4.80 59-20694

Trans. of *Elektrichestvo (USSR) 1958, no. 4, p. 1-9.

Busch, G.
"ROCHELLE-ELECTRICAL" PROPERTIES OF ISOMORPHOUS CRYSTALS. [1959] 1p. 1 ref.
Order from SLA mi$1.80, ph$1.80 59-20435

Trans. of Helvetica Physica Acta (Switzerland) 1937, v. 10, p. 261.

Forestier, H[ubert] and Guiot-Guillain, G[eorges].
A NEW SERIES OF FERROMAGNETIC SUBSTANCES: RARE EARTH FERRITES. Aug 59, 4p. 8 refs.
Order from SLA mi$1.80, ph$1.80 59-20899

Trans. of Academie des Sciences [Paris]. Comptes Rendus (France) 1950, v. 230 [no. 21] p. 1844-1845.

Discussions are presented on the preparation of a new series of ferromagnetic compounds of the ferrite type represented by the general formula $Fe_2O_3 \cdot M_2O_3$ where M represents one of the rare earth elements, their stability, and the variation of their magnetization as a function of the temperature.

Kiseleva, L. G. and Kabanov, B. N.
THE FORMATION AND ELECTROCHEMICAL PROPERTIES OF THE CRYSTAL MODIFICATIONS OF LEAD DIOXIDE, tr. by U. B. Thomas, Jr. Aug 59, 10p. 11 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20486

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 122, no. 6, p. 1042-1045.

Adsorption measurements and X-ray graphic studies are described which indicate that chemisorption of H_2SO_4 on the PbO_2 surface is the reason for the retardation of the $PbO_2 \rightarrow PbSO_4$ process and also for the formation of the tetragonal (β) form.

Kogan, Sh. M. and Sandomirskiy, V. B.
ON THE ELECTRONIC THEORY OF CHEMISORPTION ON THE ACTUAL SURFACE OF A SEMICONDUCTOR. [1959] 4p. 8 refs.
Order from MDF $2.00 MDF K-173

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1959, v. 127, no. 2, p. 377-379.

The following previously found experimental regularities are considered: (1) The measured population of the surface by the adsorbed molecules, at which notable changes in the work function start to be observed ($\sim kT$ for $T = 300°K$) is usually higher than $\sim 10^{13}$ cm^{-2}; (2) the dependence of the change in the work function on the population is usually linear and sometimes logarithmic; and (3) the maximum changes in the work function during the adsorption of various gases on different semiconductors are usually ~ 0.3 eV (12 kT at $T \simeq 300°K$).

Perucca, E.
ELECTRIC CONDUCTIVITY OF METALLIC LAYERS FORMED BY CATHODIC SPUTTERING. [1959] 14p. (8 figs. omitted) 17 refs.
Order from SLA mi$2.40, ph$3.30 59-20832

Trans. of Annalen der Physik (Germany) 1930 [5 ser.] v. 4, no. 2, p. 252-272.

Ryvkin, S. M.
REVIEW OF PAPERS READ AT THE SESSIONS OF THE SECTION FOR "PHOTOELECTRIC PHENOMENA IN SEMICONDUCTORS" (Obzor Rabot Dolozhennykh na Zasesaniyakh Sektsii "Fotoelektricheskiye Yavleniya v Poluprovosnikakh). Jan 58 [15]p. C. T. S. 385.
Order from LC or SLA mi$2.40, ph$3.30 59-19630

Trans. of Uspekhi Fizicheskikh Nauk (USSR) 1956, v. 60, no. 2, p. 225-248.

Shabanskiy, V. P.
THE HEATING OF ELECTRON GAS AND TRANSFER PROCESSES IN CONDUCTORS (Razogrevaniye Elektronnogo Gaza i Protsessy Perenosa v Provodnikakh). 28 Oct 58 [11]p. (53 equations omitted) 8 refs. M-V. Trans. no. 2487; M. 130.
Order from LC or SLA mi$2.40, ph$3.30 59-18741

Trans. of *Fizika Metallov i Metallovedeniye (USSR) 1957, v. 5, no. 2, p. 193-202.

New equations are derived for the transfer processes in metals and semiconductors with particular reference to the heating of the electron gas (Metropolitan-Vickers abstract)

Shionoya, Shigeo and Ishikawa, Tsuyoshi.
MEASUREMENT OF THE DISTRIBUTION OF GRAIN SIZES BY THE MICROSCOPICAL METHOD AND ITS ANALYSIS, tr. by Marcel L. Weinrich. Rept. no. 1 on the Grain Size Distribution of Fluorescent Material and its Aggregation Condition in a Solution. [1959] 10p. 4 refs.
Order from LC or SLA mi$1.80, ph$1.80 SCL-T-218

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1954, v. 57, pt. 2, no. 658, p. 89-90.

A study was made of the zinc sulfide group of fluorescent materials used for fluorescent screens of television and fluorescent screens of X-rays. Measurements were made of the grain size distribution (by the microscopic method) and of the degree of aggregation when the fluorescent material is added to the various solutions. Methods are discussed by which dispersion in solutions may be increased. (Speech delivered April 2, 1953 before the 6th Annual Conference of the Japanese Chemistry Association).

Skryabin, A. K.
THE KINETICS OF CRYSTALLIZATION PROCESSES OF SOLUTIONS AND MELTS. 31 Aug 59, 18p. (4 figs. omitted) 1 ref. JPRS: L-938-N.
Order from OTS $0.50 59-13830

Trans. of Zhurnal Fizicheskoy Khimii (USSR) 1957 [v. 31] no. 4, p. 780-791.

Sominskiy, M. S.
SEMICONDUCTOR THERMOELECTRIC APPARATUSES (Poluprovodnikovyye Termoelektricheskiye Ustroystva). [1959] [22]p. (3 figs. omitted). F-TS-9856/III.
Order from LC or SLA mi$2.70, ph$4.80 59-19512

Trans. of Akademiya Nauk SSSR. Vestnik, 1956, v. 26, no. 12, p. 14-23.

Stil'bans, L. S.
THERMOELECTRIC EFFECTS (Termoelektricheskiye Yavleniya). [1959] [36]p. (10 figs. omitted) 3 refs. F-TS-9834/III.
Order from LC or SLA mi$3.00, ph$6.30 59-19482

Trans. of Russian mono. Poluprovodniki v Nauke i Tekhnike 1957, v. 1, chap. 4, p. 113-132.

Topics discussed include (1) theory of thermoelectric effects, (2) electron entrainment by phonons, (3) procedures for measuring thermoelectric characteristics properties of semiconductors, and (4) a comparison of experimental and theoretical results of studies covering thermoelectric properties of semiconductors and semimetals.

Strakhov, S. V.
A SIMPLE METHOD OF OBTAINING EXPRESSIONS OF ELECTRIC AND MAGNETIC FIELD VECTORS BY MAGNETIC AND ELECTRIC HERTZIAN VECTORS. Appendix C-11. [1959] 8p. (2 drawings omitted) 1 ref.
Order from LC or SLA mi$1.80, ph$1.80 59-20682

Trans. of Elektrichestvo (USSR) 1949, no. 2, p. 43-46.

Weil, L[ouis].
MAGNETISM: MAGNETOSTRICTION OF VARIOUS ORIENTED FERRITES IN A HEATED STATE. July 59, 3p. 3 refs.
Order from SLA mi$1.80, ph$1.80 59-20600

Trans. of Academie des Sciences [Paris]. Comptes Rendus (France) 1952, v. 234 [no. 13] p. 1351-135[4].

Two series of measurements were made. In the first series, the sample was oriented by a field parallel to the measuring field; in the second, it was oriented by a field perpendicular to the measuring field. The orientation field attained 8,000 and 12,000 oersteds, respectively, and was effective from 850°C during the cooling (about ten minutes) to room temperature. For solutions with less than 50% of cobalt ferrite, the measuring field of 2,500 oersteds was sufficient to saturate the second series. When the measuring and the orientation fields were parallel (first series), the rotations or wall shifts were small during the measuring and $\delta l/l$ was near zero for the orientable samples. The values determined during the two series remain different for the identical composition, i.e., the ferrites remain orientable, even those where the cobalt content is only a few percent.

Yeremenko, V. A.
LUMINESCENCE OF CADMIUM SULFIDE CRYSTALS. [1959] 11p. 12 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20836

Trans. of Optika i Spektroskopiya (USSR) 1958, v. 4, no. 3, p. 348-353.

Various CdS crystals were investigated at 20°K. At least six types of spatially distributed centers related to the CdS crystal lattice defects were determined. The "green" luminescence is related to at least two of these, while the "blue" luminescence depends upon the rest. The vibration series of bands were shown.

Thermodynamics

Conn, W. M.
WIRE EXPLOSIONS WITH INTERRUPTED WIRE (Uber Drahtexplosionen mit Unterbrochenem Draht). [1959] [2]p.
Order from SLA mi$1.80, ph$1.80 59-20626

Trans. of Zeit[schrift fjir] Naturforschung (West Germany) 1958, v. 13a [no. 4] p. 355-356.

Danusso, Ferdinando, Moraglio, Giovanni, and Flores, Eduardo.
ENTHALPY AND ENTROPY OF FUSION OF ISOTACTIC POLYPROPYLENE. [1959] 13p. 14 refs.
Order from SLA mi$2.40, ph$3.30 59-20890

Trans. of Accad[emia] Naz[ionale dei] Lincei. [Classe di Scienze Fiziche, Matematiche e Naturali]. Rend[iconti] (Italy) 1958 [ser. 8] v. 25 [no. 6] p. 520-527.

The enthalpy of fusion ΔH_u of isotactic polypropylene, determined by the method of decrease of the melting point by the addition of diluents and with the application of a relationship derived from the thermodynamic-statistical theory of solutions of polymers is 2,600 calories per unit ($\pm$100). On basis of the melting point of the pure polymer, from this value there is calculated an entropy of fusion ΔS_u of 5.8 calories per unit ^{o}K ($\pm$0.2). The heat of fusion of polypropylene is identical to that of polyethylene, referred to the weight of substance, while the melting point of the former is higher than that of the latter, probably due to the different crystalline structure of the polymers. The value of ΔS_u conforms, however, to that of other linear polymers, like polymethylene and polychloroprene, the structural unit of which is composed of three linked atomic groups and appears to have greater configurational possibilities. (Author's conclusion)

Freiwald, H[einz] und Ude, H[ans].
SPHERICAL EXPLOSION WAVES IN MIXTURES OF ACETYLENE AND AIR. 29 Apr 55, 2p. (3 figs. omitted) 2 refs.
Order from SLA mi$1.80, ph$1.80 59-20927

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1953, v. 236 [no. 18] p. 1741-1743.

Kutateladze, S. S.
HEAT TRANSFER IN CONDENSATION AND BOILING, tr. by S. J. Rimshaw. Second ed., rev. Aug 59, 207p. 160 refs.
Order from OTS $2.25 AEC-tr-3770

Trans. of mono. Teploperedacha pri Kondensatsii i Kipenii, 2ed., rev., Moscow, 1952.

The basic principles of heat exchange during a change in state and practical data dealing with heat transfer in condensation and boiling are presented. There are separate chapters on the different kinds of boiling, and on certain aspects of the hydrodynamics of vapor-liquid mixtures. This book is intended for engineers and scientific personnel engaged in the design of heat exchangers, the theory of heat transfer or thermodynamics. It may also be utilized by students of mechanical and power engineering. (Author's abstract)

Manson, N[uma] and Ferrié, F[rank].
SPHERICAL EXPLOSION WAVES IN GAS MIXTURES. 29 Apr 55, 2p. (2 figs. omitted) 6 refs.
Order from SLA mi$1.80, ph$1.80 59-20926

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1952, v. 235 [no. 2] p. 139-140.

Samsonov, G. V. and Strel'nikova, N. S.
ON THE THERMOELECTROMOTIVE FORCE OF CERTAIN METALLIC BORIDES AND CARBIDES IN COMBINATION WITH COPPER (Pro Termoelektrorushiynu Silu Deyakikh Metalopodibnikh Boridiv i Karbidiv u Pari z Middyu). [1959] [7]p. F-TS-9800/V.
Order from LC or SLA mi$1.80, ph$1.80 59-19772

Trans. of Ukrayins'kyy Fizychnyy Zhurnal (USSR) 1958, v. 3, no. 1, p. 135-138.

Measurements were made of the thermo-electromotive force of borides TiB_2, ZrB_2, VB_2, NbB_2, CrB_2, Mo_2B_5, W_2B_5, CaB_6, BaB_6, LaB_6, CeB_6, ThB_4, ThB_6, NdB_6, PrB_6 and carbides TiC, ZrC, VC, NbC, TaC, Cr_3C_2, Mo_2C, WC in the form of cylindrical specimens (D = 6 —8, H = 25 —30 mm) sintered from powders, in contact with copper. The coefficient of the thermo-electromotive force "a" = $\Delta E/\Delta t$, in $\mu v/^{o}C$ of the borides was lower than that of the carbides. The coefficient of the thermo-electromotive force decreases on passing from carbides of metals with high defecting d-levels of electrons to carbides of metals with less defecting d-levels.

Wave Propagation

Aksenov, V. I.
THE SCATTERING OF ELECTROMAGNETIC WAVES BY SINUSOIDAL AND TROCHOIDAL SURFACES WITH FINITE CONDUCTIVITY. [1959] [14]p. 6 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20688

Trans. of *Radiotekhnika i Elektronika (USSR) 1958 [v. 3] no. 4, p. 459-466.

A solution of the problem of scattering of electromagnetic waves by a limited portion of a sinusoidal or trochoidal surface with finite conductivity is obtained in Kirkhoff's approximation. The solution makes it possible to compute a scattered field in a far zone. A method of determining the wave's amplitude at the maxima of the lobes of scattering is proposed and an example of computing the scattering of electromagnetic waves by a sinusoidal surface is examined. (Author)

Braude, S. Ya.
ON THE DISTRIBUTION OF SCATTERING ELEMENTS DURING THE PROPAGATION OF RADIO WAVES OVER A ROUGH SEA SURFACE. [1959] 9p. 9 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20695

Trans. of Izv[estiya] Vys[shikh] Ucheb[nykh] Zav[edeniy]. Radiofizika (USSR) 1958, v. 1, no. 3, p. 25-29.
Another translation is available from OTS $0.50 as 59-13545, JPRS(NY)-1612, 1 June 59, 8p.

A procedure is proposed in this paper for the statistical investigation of the distribution of scatterers by measuring the radio signals reflected from the agitated sea surface. For this purpose use is made of methods analogous to those employed in radio astronomy in the determination of the distribution of discrete sources of cosmic radio waves. Comparison with experiments has shown that the proposed procedure makes it possible to obtain certain data on the character of the distribution of the elements that scatter radio waves.

Braude, S. Ya. and Bass, F. G.
ON THE POSSIBILITY OF DETERMINING THE FUNCTION OF DISTRIBUTION OF SCATTERING ELEMENTS ON A ROUGH SEA SURFACE BY RADAR METHODS. [1959] 3p. 3 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20689

Trans. of Izvestiya Vys[shikh] Ucheb[nykh] Zav[edeniy]. Radiofizika (USSR) 1958, v. 1, no. 3, p. 161-162. Another translation is available from OTS $0.50 as 59-13547, JPRS(NY)-1614, 1 June 59, 3p.

Braude, S. Ya., Komarov, N. N., and Ostrovskiy, I. Ye.
ON THE STATISTICAL CHARACTER OF THE SCATTERING OF CENTIMETER RADIO WAVES BY A ROUGH SEA SURFACE. [1959] 16p. 9 refs.
Order from LC or SLA mi$2.40, ph$3.30 59-20690

Trans. of *Radiotekhnika i Elektronika (USSR) 1958, [v. 3] no. 2, p. 172-179.

The probable distributions of amplitudes and phases, the low-frequency spectrum of the signal's fluctuation curve, and the constant and mean-quadratic speeds of motion of the parts of the disturbed sea surfaces are determined by assuming that the signal consists of a direct wave that is coherently reflected and the sum of elementary reflected waves with random phases and amplitudes.

Mirimanov, R. G.
METHOD OF FINITE CONDUCTIVITY IN THE THEORY OF DIFFRACTION OF ELECTROMAGNETIC WAVES. [1959] 3p. 9 refs.
Order from LC or SLA mi$1.80, ph$1.80 59-20687

Trans. of *Radiotekhnika i Elektronika (USSR) 1958, v. 3, no. 7, p. 971-972.

The author points out that all of his papers (e.g., Doklady Akad Nauk SSSR 66: 641-644, 1949, available in translation as 59-20210) on the construction of solutions for certain diffraction problems are based on a method of solving integral-differential equations first proposed by Primakoff and Keller (J. Acoust. Soc. Am. 19: 5, 1947), and that the method should be designated as the Primakoff and Keller method.

Mirimanov, R. G.
ON ONE NEW METHOD OF SOLVING PROBLEMS OF REFLECTION OF ELECTROMAGNETIC WAVES FROM THIN OPEN SURFACES OF FINITE CURVATURE. [1959] 8p.
Order from LC or SLA mi$1.80, ph$1.80 59-20210

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 66, no. 4, p. 641-644.

The Ostrogradski-Green theorem is used to derive the following inhomogeneous integral equation of the scalar function

$$\phi(r) = \phi_0(r) + h\phi_1(r)$$

$$= \phi_0(r) + h(\phi/4\pi) \int_{S_1} \{-k_a^2 \cos\alpha \cos\gamma [(\varepsilon_b/\varepsilon_a) - 1]$$

$$-k_a^2 \cos^2\gamma [1 - (\varepsilon_a/\varepsilon_b)] \quad (\varepsilon_a/\varepsilon_b)(k_b^2 - k_a^2)$$

$$+2ik_a C_{cp} \cos\gamma [(\varepsilon_b/\varepsilon_a) - 1][(\varepsilon_a/\varepsilon_b) - 1]\} \frac{\exp[ik_a\{|r - r'| + |r' - r_o|\}]}{|r - r'| \cdot |r' - r_o|} dr',$$

which can be used to determine the vector components of the electric and magnetic field. The assumptions are that $|r - r'|/\lambda_a \gg 1$, $|r' - r_o|/\lambda_a \gg 1$, and that the thickness of the reflecting surface is uniform and small. Here $\phi_0(r)$ is the scalar potential of the incident field (at an arbitrary point, r, of the region surrounding a homogeneous body in an infinite homogenous medium), which is created by a point source at r_o; S_1 is one of two parallel paths of the surface; γ is the angle between $r' - r_o$ and n' (n' is the outer normal to the surface); α is the angle between $r' - r$ and n'; ε_a and ε_b are the complex dielectric constants (penetrabilities) corresponding to the medium and the body, respectively; and C_{cp} is the average curvature of the surface at the point r'. An example is given showing how the scalar function $\phi(r)$ can be used when the reflecting surface has axial symmetry and an electric dipole serves as the source of the field.

Troytskiy, V. N.
ON THE DIRECTIVE INFLUENCE OF ANTENNAS DURING DISTANT TROPOSPHERIC DISPERSION OF ULTRA-SHORT WAVES. Appendix C-8. [1959] 3p. 1 ref.
Order from LC or SLA mi$1.80, ph$1.80 59-20686

Trans. of unidentified Russian mono.

Vaynshteyn, L. A.
DECELERATION OF ELECTROMAGNETIC WAVES BY DIELECTRICS AND CONDUCTORS. [1959] 49p.
Order from LC or SLA mi$3.30, ph$7.80 59-20628

Trans. of mono. [Elektromagnitnyye Volny] Chap. 11, Moscow, 1957.

Topics discussed include: (1) Slow electromagnetic waves; (2) the propagation of a surface wave along

a conductor having finite conductivity; (3) Tzennek's surface wave; (4) deceleration of waves by a dielectric disc; (5) other types of "smooth" decelerating systems and their application; (6) the propagation of waves along a dielectric rod and related problems; and (7) propagation of waves along a conducting rod having a dielectric casing. (See also 59-20627, 59-20629, 59-20630)

[Vaynshteyn] L. A.
DIFFRACTION OF ELECTROMAGNETIC WAVES. [1959] 61p.
Order from LC or SLA mi$3.90, ph$10.80
59-20630

Trans. of mono. [Elektromagnitnyye Volny] Chap. 15, Moscow, 1957.

Discussions are presented on: (1) Huygens' principle for an electromagnetic field; (2) diffraction by an aperture of arbitrary form; (3) diffraction by a rectangular aperture; (4) Fraunhofer and Fresnel diffraction waves from the edges; (5) diffraction by a round aperture; (6) limits of applicability of Huygens' principle; (7) diffraction by a disc; and (8) the duality principle (Babinet's principle). (See also 59-20657, 59-20658, 59-20659).

[Vaynshteyn] L. A.
EXCITATION OF ELECTROMAGNETIC WAVES BY THE GIVEN SOURCES. [1959] 58p.
Order from LC or SLA mi$3.60, ph$9.30
59-20629

Trans. of mono. [Elektromagnitnyye Volny] Chap. 14, Moscow, 1957.

Discussions include: (1) Lorentz's lemma and the reciprocity theorem for electric dipoles; (2) magnetic dipoles and their reciprocity theorems; (3) orthogonality of waves in a waveguide; (4) excitation of waveguides; (5) certain applications of the theory of excitation of waveguides; (6) additions to the theory of excitation of waveguides; (7) excitation of surface waves; and (8) excitation of a conic speaker and related problems. (See also 59-20627, 59-20628, 59-20630)

[Vaynshteyn] L. A.
THE SKIN EFFECT THEORY. [1959] 33p.
Order from LC or SLA mi$3.00, ph$6.30
59-20627

Trans. of unidentified mono. [Elektromagnitnyye Volny] Chap. 4, Moscow, 1957.

Discussions are presented on: (1) The concept of the perfect conductor and the boundary conditions on its surface; (2) strong skin effect and the boundary conditions of Leontovich); (3) conductor resistance during strong skin effect; and (4) the skin effect in a cylindrical conductor. (See also 59-20628, 59-20629, 59-20630)

RESEARCH METHODS, TECHNIQUES AND EQUIPMENT

AKADEMIYA NAUK SSSR. DOKLADY, 1959, V. 126 (Reports of the Academy of Sciences of the USSR). [1959]
Order from OTS $1.40, $20.00/6 mo.
Foreign $1.65, $24.50/6 mo.

No. 1, p. 9-224, PB 141 015T-37
No. 5, p. 959-1176, PB 141 015T-38
No. 6, p. 1183-1392, PB 141 015T-39

Consists of abstracts in English.

*IZMERITEL'NAYA TEKHNIKA (USSR) 1959, NO. 8, P. 1-64 (Measurement Techniques). [1959] 1v. SOV-115-59-8-(1-33)/33.
Order from OTS $0.70, $4.00/year PB 141 112T-13
Foreign $0.95, $5.50/year

Consists of abstracts in English.

NAUKA I ZHIZN' (USSR) 1959, [V. 26] (Science and Life). [1959]
Order from OTS $0.70, $4.00/6 mo.
Foreign $0.95, $5.50/6 mo.

No. 6, p. 1-80, PB 141 020T-17
No. 7, p. 1-80, PB 141 020T-16

Consists of abstracts in English.

POLICY, ORGANIZATION, PLANNING, AND CONTROL OF SOVIET SCIENCE AND TECHNOLOGY. 30 Dec 57 [30]p. PAL 59-9.
Order from OTS $0.75 59-21227

The current policy of the Soviet government is to direct the development of its science and technology toward achieving military, political, and economic supremacy over the United States. The Soviet regime has considerable insight into the potentialities of science as an accelerator of technological progress and has accepted as axiomatic that progress in both fundamental and applied science will lead to increased national strength. Although the USSR in pursuing its scientific aims has made many mistakes such as wasteful duplication, imbalances caused by crash programs, and the political imposition of dogma upon some scientific theories, the government's increasingly generous support of science and technology has fostered the rapid emergence of a strong scientific-technical system. Organizational changes now being introduced in this system will probably reduce many of its previous defects so that during the next decade, provided that there are no major political or economic upheavals, Soviet science and technology will develop at an even greater rate than in the past. Present emphasis is

upon improved coordination of research combined with a broad geographical distribution of strong scientific centers capable of furnishing effective support to the industries of the new economic regions which were established under the law of May 1957. Under the 1957 economic reorganization, research is to be administered so as to achieve a more efficient division of labor among scientific, industrial, and educational institutions. Responsibility for scientific policy, planning, and control will be allotted as follows according to present plans: (1) The Academy of Sciences, USSR, will develop broad, long-range scientific policy and will control fundamental research in a few external high-priority areas in addition to the Academy's own broad program; (2) All-union and union-republic ministries will be concerned with policy immediately affecting their own specialties, such as defense, agriculture, or health, and will control all pertinent research but will be called upon to cooperate more closely with other planning organs; and (3) The State Planning Committee (GOSPLAN) will limit its direct concern with scientific policy and control over research to key non-defense industries and will act in close cooperation with an advisory Scientific-Technical Committee of the USSR Council of Ministers. This Scientific-Technical Committee includes authoritative representation from the Academy of Sciences, the ministries, and GOSPLAN. It will advise GOSPLAN as to the scientific and technical level at which the national economy can be planned. Promise of success in achieving higher productivity in research is heightened by the decreasing tension and distrust between scientists and the government and the Communist Party. The advice of leading scientists is now sought on measures affecting the quality and output of Soviet science, and scientists at all levels appear more willing to display initiative than formerly. Furthermore, the regime seems to be convinced that, whatever the risk, Soviet scientists should be free to reap the maximum benefit from international scientific interchange. Barring serious political upset, the liberal policy toward scientists is not likely to be reversed.

SOVIET PUBLICATION AND DISTRIBUTION OF SCIENTIFIC AND TECHNICAL INFORMATION. 13 Sep 57 [19]p. PAL 59-8.
Order from OTS $0.50 59-21226

Since about 1950, increased attention has been given in the USSR to the improvement of the dissemination of scientific and technical information. This attention has led to a constant expansion of the Soviet publication effort and to the establishment in Moscow of the world's largest scientific and technical information center. The Soviet information program has now developed to the point where scientists working in important research centers have access to almost all research developments reported in unclassified scientific or technical literature. However, many scientific and technical personnel outside these important centers still do not have adequate access to information of possible significance to them. Full distribution of scientific and technical information in the USSR is still hampered by shortages of newsprint and press equipment and by security restrictions. Furthermore, adequate media appear to be lacking for informing industry of new ideas and techniques resulting from scientific research. Soviet experimentation to find sophisticated methods of mechanizing scientific information retrieval and related processes is strongly motivated and does not suffer from lack of personnel or funds. To date, this research is of a theoretical competence equal to that in Western nations but shows a slight lag in equipment. Current Soviet measures to meliorate existing deficiencies in the dissemination of information plus current efforts to adapt advanced techniques to information processing and to improve the organization of information facilities will probably succeed within a few years, thus making information in most scientific and technical fields easily and quickly available to all who can use it. (Author's conclusions)

Reznikov, O. I.
NEW METHODS AND INSTRUMENTS FOR TESTING MOTION PICTURE CAMERAS. [1959] 5p. 1 ref. T-2986.
Order from LC or SLA mi$1.80, ph$1.80 59-20833

Trans. of Tekhnika Kino i Televideniya (USSR) 1958, no. 11, p. 62-65.

Semenov, N.
SCIENCE TODAY AND TOMORROW (Nauka Segodnya i Zavtra). 15 Sep 59 [12]p. AF 1256063.
Order from LC or SLA mi$2.40, ph$3.30 59-19703

Trans. from Izvestiya (USSR) 1959, 9 Aug, p. 3.

Ideas expressed by N. S. Khrushchev at the June Plenary Session relative to the role of science and technology in building the communist society are analyzed with respect to the operations of the Academy of Sciences of the USSR.

Topchiyev, A. V.
OUR SCIENCE TOMORROW (Zavtra Nashey Nauki). [1959] [20]p. F-TS-9924/V.
Order from LC or SLA mi$2.40, ph$3.30 59-19498

Trans. of Znaniye Sila (USSR) 1958, no. 12, p. 4-6.

Popular presentation of data from an interview with A. V. Topchiyev, vice president of the USSR Academy of Sciences. Topics are as follows: Water is the fuel of the future; On the way to anti-matter; Superfluidity, superconductivity; Automatons of the main USSR power system; Grafted polymers; Ray-catalyzers; Economic geology; Water is a mineral product; An artificial muscle.

SOCIAL SCIENCES

CURRENT DEVELOPMENTS IN SOVIET SCIENTIFIC AND TECHNICAL EDUCATION. 9 Feb 59 [17]p. PAL 59-6.
Order from OTS $0.50 59-21224

To meet ever greater demands for skilled workers and technicians while assuring a continued supply of scientists and engineers, the Soviet Union is currently changing its educational system. Since the college-preparatory orientation of the 10-year school (the basic unit of the system) did not equip students for assuming jobs in a technical society, new courses in workshop training, technical drawing, and factory and farm operations have been introduced. Experimental schools of 11 years' duration, which combine work in the factory with schooling, have been established and are being multiplied. At the same time, academically oriented 10-year schools remain to assure a continued supply of limited numbers of prospective higher school entrants. These changes in primary-secondary education should prevent the lowering of quality in the college-preparatory courses by separating the gifted students from the less talented ones - thereby avoiding mediocrity in the classrooms. Despite increasing numbers of 10-year school graduates seeking admittance to higher educational institutions (VUZ's), the overall quota of the VUZ's remains at about 200,000 full-time students. As competition has intensified, stiffer entrance requirements have been imposed. Preference is given to applicants that have had 2-years' work experience. Future freshmen should be more mature and less preoccupied with theory at the expense of practice. To meet the needs of rapidly advancing technology, students will now be subjected to broader, less specialized training and will be given more opportunity for independent work. Correspondence and evening courses in both secondary and higher education are to be expanded. Much improvement will have to be made in correspondence courses in higher educational institutions before they approach the level of full-time training. (Author's summary)

SCIENTIFIC AND TECHNICAL MANPOWER IN THE USSR. 20 Nov 58 [40]p. PAL 59-7.
Order from OTS $1.00 59-21225

The Soviet Union now possesses a large and highly motivated force of scientific and technical professional manpower that is growing in size and effectiveness. In 1957, the Soviet Union had about 1,475,000 scientific and technical professionals as compared with 1,330,000 in the United States or a force about 10 percent larger than its U. S. counterpart. The Soviet force includes about 30 percent more holders of advanced scientific and technical degrees, roughly of Ph. D. level, than does the U. S. force. The Soviet numerical superiority, however, is not uniformly reflected among the different fields and educational levels of science and technology. A survey of the relative size of the various components of the Soviet and U. S. forces is tabulated. The substantial Soviet groups of professional manpower in engineering, the health sciences, and the agricultural sciences include larger percentages of advanced personnel than do their U. S. counterparts. The smaller Soviet groups in the physical and biological sciences, on the other hand, include about the same percentage of personnel with advanced degrees as do their U. S. counterparts. The Soviet force is growing at a net yearly increase of between 6 and 7 percent while the U. S. force is between 3 and 4 percent. By 1961, Soviet manpower will probably increase to 2,000,000 or about 25 percent larger than the estimated U. S. strength of about 1,600,000. The Soviets will have an even greater quantitative advantage in engineering and agricultural sciences, but their relative disadvantages in health sciences, physical sciences, and biological sciences will remain much as they are today. The patterns of difference between the two countries are expected to persist during the next 10 years. The increase in number of Soviet scientific and technical professionals is being accompanied by an overall increase in quality. Soviet professional caliber will tend strongly to improve relative to that of the United States.

BOOK REVIEWS

The following book reviews can be ordered by number from LC. Each review includes, in addition to the material shown, a detailed statement of the coverage of the book and a detailed table of contents. The length of each review is indicated at the end of the entry.

BR-SOV/2030
Vasil'yev, Dmitriy Vasil'yevich, Boris Afanasyevich Mitrofanov, Grigoriy L'vovich Rabkin, Georgiy Nikanorovich Samokhvalov, Aleksandr Aleksandrovich Semenkovich, Aleksandr Vasil'yevich Fateyev, and Nikolay Ivankovich Chicherin
RASCHET SLEDYASHCHEGO PRIVODA (Servodrive Design) Leningrad, Sudpromgiz, 1958. 370 p. 8,000 copies printed. Errata slip inserted. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2087
ELEMENTY SISTEM AVTOMATICHESKOGO REGULIROVANIYA. CH. 1: CHUVSTVITEL'NYYE USILITEL'NYYE I ISPOLNITEL'NYYE ELEMENTY (Elements of Automatic Control Systems. pt. 1: Sensing, Amplifying and Control Elements) Moscow, Mashgiz, 1959. 722 p. (Series: Osnovy avtomaticheskogo regulirovaniya, t 2) Errata slip inserted. 13,000 copies printed. 6p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2092
Chertoryzhskiy, Konstantin Vakkhovich
ELEKTROAVTOMATIKA METALLOREZHUSHCHIKH STANKOV (Electric Automatic Control of Metal-cutting Machine Tools) 2d ed., rev. and enl. Kiyev, Mashgiz, 1959. 299 p. Errata slip inserted. 12,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2097
Perov, V. P.
STATISTICHESKIY SINTEZ IMPUL'SNYKH SISTEM (Statistical Synthesis of Sampled Data Control Systems) Moscow, Izd-vo "Sovetskoye radio," 1959. 453 p. Number of copies printed not given. 5p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2166
OPYT RATSIONALIZATSII KUZNECHNOGO PROIZVODSTVA; K 250-LETIYU LENINGRADA (Experience in Improving Forge Work; On the 250th Anniversary of Leningrad) [Leningrad] Lenizdat, 1957. 194 p. 3,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2173
Nauchnaya konferentsiya po statisticheskoy Metodologii izucheniya proizvoditel'nosti truda v narodnom khozyaystve SSSR. Moscow, 1956
STATISTICHESKAYA METODOLOGIYA IZUCHENIYA PROIZVODITEL'NOSTI TRUDA V NARODNOM KHOZYAYSTVE SSSR; STENOGRAMMA NAUCHNOY KONFERENTSII /DOKLADY, VYSTUPLENIYA V PRENIYAKH I RESHENIYA/ (Statistical Methodology in the Study of Labor Productivity in the National Economy of the USSR; Stenographic Report of the Scientific Conference/ Reports, Speeches in Discussion, and Resolutions/) Moscow, Gosstatizdat, 1958. 382 p. Errata slip inserted. 1,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2175
Moscow. Eksperimental'nyy nauchno-issledovatel'skiy institut metallorezhushchikh stankov
YEDINAYA SISTEMA PLANOVO-PREDUPREDITEL'NOGO REMONTA I EKSPLUATATSII TEKHNOLOPOLOZHENIYE (Unified System of Planned Preventive Repair and Operation of Equipment in Machinery-Manufacturing Plants; Determination of Standards) 3rd ed. Moscow, Mashgiz, 1958. 539 p. Errata slip inserted. 25,000 copies printed. 12p. Microfilm $2.40 Photocopy $3.30

BR-SOV/2183
Krayzmer, Leonid Pavlovich
ZAPOMINEYUSHCHIYE USTROYSTVA (Memory Devices) Moscow, Gosenergoizdat, 1959. 110 p. (Series: Massovaya radiobiblioteka, vyp. 337) 60,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2194
Logotkin, Ivan Sergeyevich
TEKHNOLOGIYA ATSETONO-BUTILOVOGO PROIZVODSTVA (Technology of the Manufacture of Acetone and Butyl Alcohol) Moscow, Pishcheprom-izdat, 1958. 266 p. 1,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2200
Astaf'yev, Vladimir Aleksandrovich, and Nikolay Kuz'mich Barkov
GIDROTURBINY I IKH OBSLUZHIVANIYE (Hydraulic Turbines and Their Maintenance) Moscow, Gosenergoizdat, 1958. 300 p. Errata slip inserted. 4,700 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2208
Mkhitaryan, Artashes Melkonovich
GIDRAVLIKA I GIDROMEKHANIKA (Hydraulics and Hydromechanics) Kiyev, Gostekhizdat, USSR, 1958. 374 p. Errata slip inserted. 9,000 copies printed. 7p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2212
Lashko, Nikolay Fedorovich, and Sof'ya Vasil'yevna Lashko-Avakyan
PAYKA METALLOV (Brazing and Soldering of Metals) Moscow, Mashgiz, 1959. 442 p. 10,000 copies printed. 5p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2222
Gratsershteyn, Izrail' Markovich
RAZVITIYE ALYUMINIYEVOY PROMYSHLENNOSTI SSSR (Development of the Aluminum Industry in the USSR) Moscow, Metallurgizdat, 1959. 160p. Errata slip inserted. 2,700 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2226
Vsesoyuznyy nauchno-issledovatel'skiy institut gidromashinostroyeniya
ISSLEDOVANIYE GIDROTURBIN (Study of Hydraulic Turbines) Moscow, Mashgiz, 1959. 195 p. (Series: Its: Trudy, vyp. 23) 1,900 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2230
Genel', Samuil Veniaminovich
DREVESNYYE PLASTIKI V TEKHNIKE (Wood Plastics in Industry) Moscow, Izd-vo AN SSSR, 1959. 85 p. 21,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2234
Arkhipov, Nikolay Kuz'mich
RASCHET GORODSKIKH ELEKTRICHESKIKH SETEY S UCHETOM REGULIRUYUSHCHIKH USTROYSTV (Calculation of Municipal Electrical Networks With Consideration for Regulating Equipment) Moscow, Izd-vo M-va kommunal'nogo khozyaystva RSFSR, 1957. 194 p. Errata slip inserted. 9,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2235
Frolkin, Viktor Tikhanovich
INDIKATORNYYE USTROYSTVA; KONSPEKT LEKTSIY. GENERIROVANIYE IMPUL'SOV OSNOVNYYE TIPY DVUMERNYKH INDIKATOROV (Indicator Devices; Summary of Lectures. Generation of Pulses and Basic types of Two-dimensional Indicators) Moscow, Oborongiz, 1959. 203 p. (Series: Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze) Errata slip inserted. 16,500 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2239
Targ, Semen Mikhaylovich
KRATKIY KURS TEORETICHESKOY MEKHANIKI (Short Course on Theoretical Mechanics) Moscow, Fizmatgiz, 1958. 400 p. 25,000 copies printed. 9p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2246
ZASHCHITA PODZEMNYKH METALLICHESKIKH SOORUZHENIY OT KORROZII; SPRAVOCHNIK. (Protection of Underground Metal Structures From Corrosion; Manual) Moscow, Izd-vo M-va kommunal'nogo khoz. RSFSR, 1959. 743 p. Errata slip inserted. 6,000 copies printed. 13 p. Microfilm $2.40 Photocopy $3.30

BR-SOV/2248
Semenenko, Nikolay Panteleymonovich, Nataliya Ivanovna Polovko, Yakov Mikhaylovich Gritskov, Mikhail Nikolayevich Dobrokhotov, Anna Aleksandrovna Makukhina, Viktoriya Danilovna Ladiyeva, Georgiy Viktorovich Zhukov, and Andrey Andreyevich Nastenko
GEOLOGIYA ZHELEZISTO KREMNISTYKH FORMATSIY UKRAINY (Geology of Ferruginous-Silicified Formations of the Ukraine) Kiyev, Izd-vo AN USSR, 1959. 687 p. Errata slip inserted. 2,000 copies printed. 15p. Microfilm $2.40 Photocopy $3.30

BR-SOV/2257
Korotkov, Viktor Ivanovich, and Anatoliy Mefodiyevich Chernysh
KORABLI BUDUSHCHEGO; ATOMOKHODY (Ships of the Future; Atomic-powered Vessels) Moscow, Voyen. Izd-vo M-va obor. SSSR. 1959. 112 p. (Series: Bibliotechka v pomoshch' ofitseru VMF) No. of copies printed not given. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2258
Chechik, Petr Oskarovich
NOVYYE ISTOCHNIKI PITANIYA RADIOAPPARATURY (New Power Supply of Radio Equipment) 2d ed., rev. Moscow, Gosenergoizdat, 1959. 47 p. (Series: Massovaya radiobiblioteka, vyp. 333) 45,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2259
Kalyazin, Yevgeniy Andreevich
POLUPROVODNIKI I IKH PRIMENENIYE NA SUDAKH (Semiconductors and Their Use on Ships) Moscow, Izd-vo "Morskoy transport," 1959. 141 p. 6,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2260
Kerblay, Tamara Semenovna
RADIOPROGNOZY I IKH SOSTAVLENIYE (Radio Forecasts and Their Compilation) Moscow,

Svyaz'izdat, 1958. 38 p. (Series: Lektsii po tekhnike svyazi) Errata slip inserted. 11,500 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2263
USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby
SBORNIK RABOT PO SINOPTIKE, NR. 2 (Collection of Articles on Synoptics, nr. 2) Leningrad, Gidrometeoizdat, 1958. 157 p. 1,200 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2268
Glavnaya geofizicheskaya observatoriya
VOPROSY FIZIKI ATMOSFERY (Problems in Physics of the Atmosphere) Leningrad, Gidrometeoizdat, 1959. 74 p. (Series: Its: Trudy, vyp. 82) Errata slip inserted. 1.250 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2273
Voznovich, P. D.
OKHLAZHDENIYE METALLURGICHESKIKH PECHEY VYSOKTEMPERATURNYMI TEPLONOSITELYAMI (Cooling of Metallurgical Furnaces by Means of High-temperature Heat Carriers) Moscow, Metallurgizdat, 1959. 228 p. Errata slip inserted. 3,200 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2274
Zizemskiy, Yefim Il'ich
MORSKIYE RADIOLOKATSIONNYYE STANTSII (Marine Radars) Leningrad, Sudpromgiz, 1959. 221 p. 10,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2277
Tilles, Semen Aronovich
EKONOMIKA TEKHNOLOGICHESKIKH PROTSESSOV MEKHANICHESKOY OBRABOTKI (Economic Aspects of Machining Processes) Moscow, Mashgiz, 1959. 298 p. Errata slip inserted. 6,500 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2278
Akademiya nauk Ukrainskoy SSR. Otdeleniye fiziko-matematicheskikh nauk
KRATKIY ASTRONOMICHESKIY KALENDAR' NA 1959 GOD (Short Astronomical Calendar for 1959) Kiyev, Izd-v AN Ukrainskoy SSR, 1958, 123 p. 5,000 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2280
Chelyabinsk. Politekhnicheskiy institut
VOPROSY SVAROCHNOGO PROIZVODSTVA (Problems in Welding) Moscow, Mashgiz, 1959. 92 p. (Series: Its: Sbornik, No. 16). 6,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2282
Mikhaylov, Aleksandr Yevgen'yevich
OSNOVY STRUKTURNOY GEOLOGII I GEOLOGICHESKOGO KARTIROVANIYA (Principles of Structural Geology and Geological Mapping) Moscow, Gosgeoltekhizdat, 1958. 375 p. Errata slip inserted 10,000 copies printed. 8p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2287
Kucher, Iosif Mikhaylovich
EKONOMICHESKAYA EFFEKTIVNOST' MODERNIZATSII STANKOV (Economic Effectiveness of Modernizing Machine Tools) Moscow, 1958. 17 p. (Series: Peredovoy opyt proizvodstva. Seriya "Ekonomika i organizatsiya proizvodstva," vyp. 2) 5,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2288
Zonnenberg, Semen Moiseyevich, and Aleksandr Sergeyevich Lebedev
PNEVMATICHESKIYE ZAZHIMNYYE PRISPOSOBLENIYA (Pneumatic Clamping Fixtures) 2nd ed., rev. Moscow, Mashgiz, 1959. 187 p. Errata slip inserted. 6,000 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2295
Moscow, Institut stali
PRIMENENIYE KISLORODA V STALEPLAVIL'NOM PROIZVODSTVE (Use of Oxygen in Steelmaking) Moscow, Metallurgizdat, 1957. 418 p. (Series: Its: Sbornik, 37) Errata slip inserted. 3,500 copies printed. 5p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2296
Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya
KORROZIYA I ZASHCHITA METALLOV V MASHINOSTROYENII (Corrosion and Protection of Metals in the Machine-building Industry) Moscow, Mashgiz, 1959. 374 p. (Series: Its: [Sbornik] kn. 92) 3,500 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2298
Burunsuzyan, E. S.
NEKOTORYYE VOPROSY SINTEZA ELEMENTOV RADIOTEKHNICHESKIKH USTROYSTV (Some Problems in the Synthesis of Radio System Elements) Yerevan, Izd-vo AN Armyanskoy SSR, 1958. 80 p. Errata slip inserted. 2,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2299
Dimentberg, Fedor Menas'yevich
IZGIBNYYE KILEBANIYA VRASHCHAYUSHCHIKHSYA VALOV (Flexural Vibrations (Whirling) of Rotating Shafts) Moscow, Izd-vo AN SSSR, 1959. 246 p. (Series: Problemy teorii mashin) 3,500 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2300
Volkomich, Aleksandr Iosifovich, Abram Petrovich Lakshin and David L'vovich Khazin
LITEYNYYE MASHINY (Foundry Machinery) Moscow, Mashgiz, 1959. 464 p. 10,000 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2301
METALLURGIYA; SBORNIK STATEY, [NO.] 1 (Metallurgy; Collection of Articles, No. 1) [Leningrad] Sudpromgiz, 1958. 177 p. 1,500 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2303
Ostrovskiy, Abram Semenovich
TELEMEKHANIZATSIYA UPRAVLENIYA ELEKTROPRIVODAMI (Remote Control of Electric Drives) Moscow, Gosenergoizdat, 1959. 127 p. 15,000 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2304
Bertinov, Al'bert Iosifovich
AVIATSIONNYYE ELEKTRICHESKIYE GENERATORY (Aircraft Electric Generators) Moscow, Oborongiz, 1959. 594 p. (Series: Aviatsionnyye elektricheskiye mashiny) Errata slip inserted. 10,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2306
Akademiya nauk Ukrainskoy SSR. Institut metallofiziki
VOPROSY FIZIKI METALLOV I METALLOVEDENIYA (Problems in the Physics of Metals and Metallography) Kiyev, Izdo-vo AN Ukrainskiy SSR, 1959. (Series: Its: Sbornik nauchnykh rabot, Nr 9) Errata slip inserted. 3,000 copies printed. 6p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2310
Draygor, D. A.
IZNOSOSTOYKOST' I USTALOSTNAYA PROCHNOST'STALI V ZAVISIMOSTI OT USLOVIY OBRABOTKI I PROTSESSA TRENIYA (Wear Resistance and Fatigue Strength of Steel Depending on Conditions of Treatment and Friction Processes) Kiyev, Izd-vo AN Ukrainskoy SSR, 1959. 139 p. 3,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2313
Akademiya nauk SSSR. Institut mashinovedeniya
POVYSHENIYE STOYKOSTI DETALEY MASHIN /SUL'FIDIROVANIYE/; SBORNIK STATEY (Increasing the Wear Resistance of Machine Parts /Sulfurization/; Collection of Articles) Moscow, Mashgiz, 1959. 126 p. Errata slip inserted. 4,500 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2315
Leningrad. Nauchno-issledovatel'skiy institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln
RADIOPROGNOZ NA 1958 GOD, CH. 1. NASTAVLENIYE K POL'ZOVANIYU GODOVYM RADIOPROGNOZOM, CH. 2. KARTY IZOPLET MAKSIMAL'NYKH PRIMENIMYKH CHASTOT I NAIMEN'SHIKH PRIMENIMYKH VYSOKIKH CHASTOT (Radio Propagation Forecast for 1958, pt. 1. Instructions for Using Annual Radio Forecasts, pt. 2. Isopleths Showing Maximum Usable Frequencies and minimum Usable High Frequencies) Moscow, Gidrometeoizdat (otd-niye), 1957. 150 p. 1,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2316
Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii
METALLURGIYA SSSR, 1917-1957; [t.] II (Metallurgy in the USSR, 1917-1957; Vol 2) Moscow, Metallurgizdat, 1959. 813 p. Errata slip inserted. 3,000 copies printed. 8p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2317
Mordkhelovich, Izrail' Isaakovich
NOVEYSHIYE AVTOMATICHESKIYE KONTROL'NO-IZMERITEL'NYYE PRIBORY (New Automatic Control and Measuring Instruments) Moscow, Pishchepromizdat, 1957. 43 p. (Series: Obmen Peredovym tekhnicheskim opytom) Errata slip inserted. 3,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2319
Borisov, Pavel Aref'yevich, and Asya Lazarevna Rabkina
GAZY-MOGUCHIY ISTOCHNIK ENERGII I KHIMICHESKOGO SYR'YA (Gases- Powerful Source of Energy and Chemical Raw Materials) Moscow, Izd-vo AN SSSR, 1959. 80 p. (Series: Akademiya nauk SSSR. Nauchno-populyarnaya seriya) 10,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2320
Avanesov, Drastamat Sergeyevich
PRAKTIKUM PO FIZIKO-KHIMICHESKIM ISPYTANIYAM VZRYVCHATYKH VESHCHESTV (Laboratory Practice on Physical and Chemical

Test of Explosives) Moscow, Oborongiz, 1959. 165 p. Errata slip inserted. 5,000 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2321
Shuleshov, Viktor Fedorovich
KORABEL'NYYE GAZOVYYE TURBINY (Marine Gas Turbines) Moscow, Voyenizdat, 1958. 247 p. (Series: Bibliotechka v pomoshch' ofitseru VMF) Number of copies printed not given. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2322
Borodich, S. V., N.I. Kalashnikov, A. M. Model', S. D. Manayenkov, and V. V. Petrov
RADIORELEYNYYE LINII SVYAZI (Radio Relay Networks) Moscow, 1957. 36 p. (Series: Obzory po tekhnike. Energetika) Errata slip inserted. 3,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2323
Barabashov, Nikolay Pavlovich
LUNA (The Moon) Moscow, Izd-vo "Sovetskaya Rossiya," 1958. 66 p. 45,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2324
Khayesh, Maks Moiseyevich
ELEKTROBEZOPASNOST' V PODZEMNYKH VYRABOTKAKH; POSOBIYE DLYA OBSHCHESTVENNYKH INSPEKTOROV PO OKHRANE TRUDA (Safety Measures for Work With Electricity in Underground Mining; Manual for Public Labor Inspectors) Moscow, Profizdat, 1958. 134 p. 5,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2328
Vorotnikov, Igor' Nikolyaevich, and Viktor Petrovich Glyadenov
MONTAZH I REMONT OBORUDOVANIYA NA NEFTEBAZAKH (Erection and Repair of Bulk Plant Equipment) Leningrad, Gostoptekhizdat, 1959. 344 p. 4,300 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2329
Tsukanov, Vladimir Andreyevich
LEGIROVANIYE KONSTRUKTSIONNOY STALI MARGANTSEM (Using Manganese in Alloying Structural Steels) Moscow, Mashgiz, 1959. 206 p. Errata slip inserted. 3,300 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2330
Shestakov, Andrian Andrianovich
MACHINIST PAROVOZDUSHNOGO MOLOTA (Steam Hammer Operator) Moscow, Mashgiz, 1959. 118 p. Errata slip inserted 8,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2335
Flekser, Ya. N.
IZ OPYTA EKSPLUATATSII GIDROELEKTROSTANTSIY SEVERNOGO KAVKAZA (Operating Experience of Hydroelectric Power Stations in the Northern Caucasus) Moscow, Gosenergoizdat, 1958. 55 p. (Series: Iz opyta sovetskoy energetiki) 2,750 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2337
Korovina, Glafira Vasil'yevna
LITAYA GRAFITIZIROVANNAYA STAL' (Graphitic Cast Steel) Moscow, Mashgiz, 1959. 38 p. (Series: Obmen tekhnicheskim opytom) 4,500 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2338
MAGNITNYYE ELEMENTY AVTOMATIKI, TELEMEKHANIKI I VYCHISLITEL'NOY TEKHNIKI; ANNOTIROVANNYY UKAZATEL' LITERATURY ZA 1957 GOD (Magnetic Components in Automatic Control, Telemechanics, and Computers; Annotated Index of Literature for 1957) no. 1. Moscow, Izd-vo "Sovetskoye radio," 1959. 69 p. Number of copies printed not given. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2339
Parnes, Mikhail Grigor'yevich
MEKHANIZATSIYA I AVTOMATIZATSIYA NEKOTORYKH TRUDOYEMKIKH PROTSESSOV; IZ OPYTA RADIOPROMYSHLENNOSTI (Mechanization and Automation of Some Labor-consuming Processes; From the Experience of the Radio Industry) Moscow, Gosenergoizdat, 1959. 115 p. 3,950 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2340
Gogichaishvili, Pavel Filippovich
KONDENSATORNYYE USTROYSTVA V SKHEMAKH RELEYNOY ZASHCHITY I AVTOMATIKI (Capacitor Devices in Circuits for Relay Protection and Automatic Control) Moscow, Izd-vo M-va kommunal. khoz. RSFSR, 1959. 116 p. Errata slip inserted. 6,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2341
Eremenko, Valentyn Nykyforovych, and Yuryy Vladymyrovych Naydych
ZMOCHUVANNYA RIDKYMY METALAMY POVERKHEN' TUHOPLAVKYKH SPOLUK (Wetting the Surface of High-Melting Alloys With Liquid Metals) Kiyev, Vyd-vo AN Ukrayins'koyi RSR, 1958. 59 p. 2,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2342
Rybarzh, A.A.
MATERIALY DLYA GLUBOKOY SHTAMPOVKI (Materials for Deep Drawing) Moscow, Mashgiz, 1959. 191 p. Errata slip inserted. 6,500 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2343
Sinitsyn, Pavel Prokof'yevich
OSNOVY VZAIMOZAMENYAYEMOSTI I TEKHNICHESKIKH IZMERENIY (Fundamentals of Interchangeability and Technical Measurements) Moscow, Oborongiz, 1959. 246 p. Errata slip inserted. Number of copies printed not given. 4p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2344
Vershinin, Nikolay Ivanovich, Anatoliy L'vovich Vertsayzer, and Vladimir Mikhaylovich Yakovlev
AVTOMATICHESKOYE REGULIROVANIYE (Automatic Regulation) Moscow, Gosenergoizdat, 1959. 127 p. (Series: Biblioteka po avtomatike, vyp. 3) 20,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2346
Lebedev, Mikhail Vasil'yevich
OPREDELENIYE KOEFFITSIYENTA MOSHCHNOSTI PROMYSHLENNYKH ELECTROUSTANOVOK (Determining the Power Factor of Industrial Equipment) Moscow, Izd-vo M-va Kommun. khoz. RSFSR, 1958. 69 p. Errata slip inserted. 3,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2347
Tolokonnikov, Leonid Stepanovich, Mikhail Mikhaylovich Sokolov, Abram Solomonovich Sandler, Vladimir Ivanovich Klyuchev, Yevgeniye Retrovich Ivanov, and Yevgeniy Nikolayevich Zimin
ATLAS ELEKTROMEKHANICHESKIKH PROMYSHLENNYKH USTANOVOK, CH. 1. ELEKTROPRIVOD I PEREDATOCHNYYE MEKHANIZMY (Atlas of Electromechanical Industrial Installations, Pt. 1. Electric Drive and Transmission Mechanisms) Moscow, Gosenergoizdat, 1958. 140 p. 6,500 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2348
Markov, Arkadiy L'vovich
IZMERENIYE TSILINDRICHESKIKH ZUBCHATYKH KOLES (Measurement of Spur Gears) 2nd ed., rev. and enl. Moscow, Mashgiz, 1959. 271 p. Errata slip inserted. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2353
Akademiya nuak SSSR. Institut kristallografii
ROST KRISTALLOV, TOM. 2 (Growth of Crystals, Vol. 2) Moscow, 1959. 238 p. Errata slip inserted. 2,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2354
Kuznetsov, Nikolay Semenovich
VYSOKOPROIZVODITEL'NYYE PRISPOSOBLENIYA I INSTRUMENT RAZMETCHIKA (High-capacity Devices and Tools for the Layout Man) Moscow, Mashgiz, 1958. 96 p. (Series: Biblioteka razmetchika, vyp. 2) 10,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-POL/2356
Głębicki, Kazimierz
WYPOSAZENIE SAMOLOTU. CZ. II: HYDRAULICZNE I PNEUMATYCZNE INSTALACJE ENERGETYCZNE NA SAMOLOCIE (Aircraft Equipment. Pt. 2: Hydraulic and Pneumatic Power Systems on Aircraft) 2d ed., rev. and enl. Lodz, PWN, 1958. 432 p. 1,070 copies printed. No additional contributors mentioned. 6p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2363
Parnitskiy, Adol'f Bronislavovich, and Aleksandr Pavlovich Shabashov
MOSTOVYYE KRANY OBSHCHEGO NAZNACHENIYA; KONSTRUKTSIYA, RASCHET EKSPLUATATSIYA (General-purpose Bridge Cranes; Construction, Design, and Operation) 2nd ed., rev. and enl. Moscow, Mashgiz, 1958. 403 p. Errata slip inserted. 14,000 copies printed. 5p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2364
Birger, Isaak Aronovich
VARIATSIONNYYE METODY V STROITEL'NOY MEKHANIKE TURBOMASHIN (Variational Methods in Structural Mechanics of Turbomachinery) [n.p.] Oborongiz, 1959. 27 p. 2,850 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2367
Moscow. Vysshaya partiynaya shkola. Kafedra promyshlennogo proizvodstva i stroitel'stva
DOSTIZHENIYA NAUKI I TEKHNIKI I PEREDOVOY OPYT V PROMYSHLENNOSTI I STROITEL'STVE. VYP. 4: TEKHNOLOGIYA MASHINOSTROYENIYA [OBRABOTKA METALLOV REZANIYEM] (Achievements in Science and Technology and Advanced Practices in Industry and Civil Engineering. Nr. 4: Machine-building Technology [Metal Cutting]) Moscow, Izd-vo VPSh i AON pri TsK KPSS, 1959. 189 p. 20,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-CZECH/2372
Kadner, Otakar E.
ASTRONOMICKA NAVIGACE PRO LETCE (Astronomical Navigation for Airmen) Praha,

S. N. T. L., 1954. 311 p. 3,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-POL/2374
Rosciszewski, J.
AERODYNAMIKA STOSOWANA (Applied Aerodynamics) [Warszawa] Wyd-wo Min. Obrony Narodowej, 1957. 415 p. Errata slip inserted. 2,000 copies printed. 7p. Microfilm $1.80 Photocopy $1.80

BR-GER/2376
Rompe, Robert, and Alois Ihln
UBER EINE NEUARTIGE STRAHLUNGESQUELLE, DIE "METALLHOCHDRUCKLAMPE" (A New Radiation Source, the "Metal High-Pressure Tube") Berlin, Akademie-Verlag, 1958. 20 p. (Series: Deutsche Akademie der Wissenschaften, Berlin. Abhandlungen. Klasse für Mathematik, Physik und Technik. Jahrgang 1958, Nr 1) Number of copies printed not given. Errata slip inserted. 1p. Microfilm $1.80 Photocopy $1.80

BR-GER/2377
Dopel, Robert
KANALSTRAHLROHREN ALS IONENQUELLEN (Canal Ray Tubes as Ion Sources) Berlin, Akademie-Verlag, 1958. 26 p. (Series: Deutsche Akademie der Wissenschaften, Berlin. Abhandlungen. Klasse für Mathematik, Physik und Technik. Jahrgang 1958, Nr 2) Number of copies printed not given. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2378
Karpenko, Vladimir Georgiyevich
ZIMNYAYA EKSPLUATATSIYA KOLESNYKH I GUSENICHNYKH MASHIN (Operation of Wheeled and Crawler-type Vehicles Under Winter Conditions) Moscow, Voyenizdat, 1958. 255 p. Number of copies printed not given. 2p. Microfilm $1.80 Photocopy $1.80

BR-POL/2379
Soltyk, Witold, and Kazimierz Leski
SAMOLOTY KOMUNIKACYJNE (Transport Airplanes) Warszawa, Panstwowe Wydawnictwa Techniczne, 1958. 117 p. (Series: Najnowsze konstrukcje lotnicze) Errata slip inserted. 4,135 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-POL/2380
Wroclawskie Towarzystwo Naukowe
IZOTOPY; CZTERY ODCZYTY O ZASTOSOWANIACH (Isotopes; Four Lectures on Their Application) [Wroclaw] Panstwowe wydawnistwo naukowe, 1957. 73 p. 2,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2383
Akademiya nauk SSSR. Komissiya po tekhnologii mashinostroyeniya
AVTOMATIZATSIYA MASHINOSTROITEL'NYKH PROTSESSOV. T. II: PRIVOD I UPRAVLENIYE RABOCHIMI MASHINAMI (Automation of Machine-building Processes. Vol. 2: Drives and Control Systems for Process Machinery) Moscow, Izd-vo AN SSSR, 1959. 370 p. Errata slip inserted. 5,000 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-CZECH/2386
Svarovsky, Josef, Engineer
RADIOVA ZARIZENI V LETECKE DOPRAVE (Radio Installations in Air Transport) Praha, Statni nakladatelstvi technicke literatury, 1955. 258 p. 2,500 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2389
Yablonskiy, V. S., S. A. Bobrovskiy, E. M. Bleykher, G. A. Royev, I. Kh. Khizgilov, and S. G. Shcherbakov
AVTOMATIZATSIYA TRANSPORTIROVANIYA I OB"YEKTOV KHRANENIYA NEFTI I NEFTEPRODUKTOV (Automatic Control of the Transportation and Storage of Oil and Petroleum Products) Moscow, 1958. 50 p. 1,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2392
Kommunisticheskaya partiya Sovetskogo Soyuza. Vysshaya partiynaya shkola
ENERGETIKA PROMYSHLENNOSTI; UCHEBNOYE POSOBIYE DLYA VYSSHIKH PARTIYNYKH SHKOL (Industrial Power; Textbook for Party Schools of Higher Education) Moscow, Izd-vo VPSh i AON pri TsK KPSS, 1959. 455 p. Errata slip inserted. 30,000 copies printed. 8p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2393
Leningrad. Politekhnicheskiy institut
MASHINOSTROYENIYE; EKONOMIKA, ORGANIZATSIYA I PLANIROVANIYE PROIZVODSTVA (Machinery Manufacturing; Economics, Organization and Planning of Production) Moscow, Mashgiz, 1958. 110 p. (Series: Its: Trudy, Nr 200) Errata slip inserted. 2,800 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2395
Udyma, Petr Grigor'yevich
REAKTSIONNYYE APPARATY ANILINO-KRASOCHNOY PROMYSHLENNOSTI; MONTAZH, EKSPLUATATSIYA I REMONT (Reaction Apparatus in the Aniline Dye Industry; Assembly, Operation, and Repair) Moscow, Mashgiz, 1959. 161 p. Errata slip inserted. 2,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2397
Ponomarev, S. D., V. L. Biderman, K. K. Likharev, V. M. Makushin, N. N. Malinin, and V. L. Feodos'yev
RASCHETY NA PROCHNOST' V MACHINOSTROYENII. T. II: NEKOTORYYE ZADACHI PRIKLADNOY TEORII UPRUGOSTI. RASCHETY ZA PREDELAMI UPRUGOSTI. RASCHETY NA POLZUCHEST' (Design for Strength in Machinery Construction. Vol 2: Some Problems in the Applied Theory of Elasticity. Calculation Beyond Elastic Limits. Design for Creep) Moscow, Mashgiz, 1958. 974 p. Errata slip inserted. 15,000 copies printed. 9 p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2398
Frayfel'd, Isay Abramovich
RASCHETY I KONSTRUKTSII SPETSIAL'NOGO METALLOREZHUSHCHEGO INSTRUMENTA; FASONNYYE REZTSY, FASONNYYE FREZY, CHERVYACHNYYE FREZY DLYA ZUBCHATYKH DETALEY (Design and Constructions of Special Metal-cutting Tools; Forming Tools, Form Cutters, and Hobs) 2d ed., unrev. Moscow, Mashgiz, 1959. 195 p. 8,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2399
Golovin, Sergey Yakovlevich
OSOBYYE VIDY LIT'YA; KRATKIZE SPRAVOCHNYYE MATERIALY (Special Types of Casting; Short Reference Materials) Moscow, Mashgiz, 1959. 462 p. Errata slip inserted. 15,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2401
Kitaygorodskiy, Aleksandr Isaakovich
VVEDENIYE V FIZIKU (Introduction to Physics) Moscow, Fizmatgiz, 1959. 704 p. 50,000 copies printed. 10p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2402
Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii
REDKOZEMEL'NYYE ELEMENTY; POLUCHENIYE, ANALIZ, PRIMENENIYE (Rare Earth Elements; Production, Analysis, and Use) Moscow, Izd-vo AN SSSR, 1959. 331 p. 5,000 copies printed. 5p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2403
RSFSR. Glavnoye upravleniye geologii i okhrany nedr. Ural'skoye geologicheskoye upravleniye
MATERIALY PO GEOLOGII I POLEZNYM ISKOPAYEMYM URALA, VYP. 6 (Materials on the Geology and Mineral Deposits of the Urals, Nr 6) Moscow, Gosgeoltekhizdat, 1958. 150 p. Errata slip inserted. 3,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-CZECH/2404
Habanec, V., J. Havelka, Zd. Hlasivec, Zb. Hrdlicka, I. Chudacek, V. Kourim, J. Kuba, V. Myslivec, Jan Tuma, and M. Vorisek
ATOM A JADERNA TECHNIKA (The Atom and Nuclear Engineering) Praha, Nase vojsko, 1957. 290 p. (Series: Universita vojaka) 4,000 copies printed. 6p. Microfilm $1.80 Photocopy $1.80

BR-POL/2407
Wojnar, J., Wl. Chajec, Br. Fleszar, R. Glaser, J. J. Glogoczowski, H. Gorka, B. Manasterski, F. Mitura, St. Niementowski, J. Ostaszewski, St. Suknarowski, L. Tomaszkiewicz, and A. Waliduda
DWANSCIE LAT PRACY INSTYTUTU NAFTOWEGO, 1945 - 1956 (Twelve Years Work of the Petroleum Institute, 1945 - 1956) Katowice, WG-H, 1957. 130 p. Errata slip inserted. 1,555 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-POL/2408
Gubrynowiczowa, Janina
WYTRZYMALOSC MATERIALOW (Strength of Materials) Warszawa, Panstwowe Wydawnictwa Naukowe, 1958. 345 p. Errata slip inserted. 5,200 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-POL/2410
Kaliski, Sylwester
PEWNE PROBLEMY BRZEGOWE DYNAMICZNEJ TEORII SPREZYSTOSCI I CIAL NIESPREZYSTYCH (Certain Boundary Problems of the Dynamic Theory of Elasticity and Dynamics of Nonelastic Bodies) Warszawa, Wojskowa Akademia Techniczna, 1957. 305 p. Number of copies printed not given. 5p. Microfilm $1.80 Photocopy $1.80

BR-POL/2411
Wierzbicki, Witold
ZADANIA Z TEORII NAPREZEN, WYBOCZENIA I DRGAN (Problem in the Theory of Tensile Stresses, Column Theory and Vibration) 2d ed. Warsaw, PWN, 1958. 167 p. 5,200 copies printed. 6p. Microfilm $1.80 Photocopy $1.80

BR-CZECH/2412
Drska, Ladislav, Bohdan Klimes, and Josef B. Slavik
ZAKLADY ATOMOVE FYSIKY (Fundamentals of Atomic Physics) Praha, Nakladitelstvi Ceskoslovenske Akademie Ved, 1958. 614 p. Errata slip inserted. 3,550 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2414
Barashenkov, V. S., and Huang, Nien-ning
SECHENIYE VZAIMODEYSTVIYA NUKLONOV PRI ENERGII 9 BEV (Interaction Cross Section of 9-Bev Nucleons) Duona, 1959. 5 p. XEROX COPY,

Number of copies printed not given. 2p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2416
GAZOSNABZHENIYE VOSTOCHNYKH RAYONOV SSSR NA OSNOVE GAZIFIKATSII TVERDYKH TOPLIV (Supplying the Eastern Regions of the USSR With Gas Produced by Solid Fuel Gasification) Moscow, Gostoptekhizdat, 1959. 214 p. 2,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2419
Rafikov, Sagid Raufovich
PLASTMASSY (Plastics) 2d ed., enl. Moscow, Fizmatgiz, 1959. 69 p. (Series: Nauchno-populyarnaya biblioteka, vyp. 42) 75,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2423
Fedoseyev, Sergey Leonidovich
MONTAZH KOTEL'NYKH AGREGATOV ELEKTROSTANTSIY (Installation of Boiler Units in Electric Power Stations) Moscow, Gosenergoizdat, 1959. 528 p. 15,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2425
Nudel'man, Moysey Grigor'yevich, and Semen Pavlovich Sayenko
POVYSHENIYE PROIZVODITEL'NOSTI TRUDA PRI MEKHANICHESKOY OBRABOTKE DETALEY MASHIN (Increasing Labor Productivity in Machining Machine Parts) Kiyev, Mashgiz, 1959. 155 p. 5,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2426
Karpenko, Georgiy Vladimirovich
VLIYANIYE MEKHANICHESKOY OBRABOTKI NA PROCHNOST' I VYNOSLIVOST' STALI (Effect of Machining on the Strength and Fatigue Resistance of Steel) Moscow, Mashgiz, 1959. 184 p. 5,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2430
Bannik, Viktor Petrovich, and Mikhail Aleksandrovich Sluchayev
MONTAZH PAROVYKH TURBIN (Erection of Steam Turbines) 3rd ed., rev. Moscow, Gosenergoizdat, 1959. 319 p. 10,000 copies printed. 4p. Microfilm $1.80 Photocopy $1.80

BR-GER/2439
VEB Rafena Werke, Radeberg, E. Germany
RICHTFUNK ANTENNEN (Directional Antennas) Radeber [1958?] [5p.] No. of copies printed not given. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2442
Tsentral'naya aerologicheskaya observatoriya
TRUDY, VYP. 19 (Transactions of the Central Aerological Observatory, Nr 19) Moscow, Gidrometeoizdat, 1958. 104 p. 1,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2443
Khotimskiy, Valentin Ivanovich
VYRANIVANIYE STATISTICHESKIKH RYADOV PO METODU NAIMEN'SKIKH KVADRAVOT /SPOSOB CHEBYSHEVA/ I TABLITSY DLYA NAKHOZHDENIYA URAVNENIY PARABOLICHESKIKH KRIVYKH. (Smoothing Statistical Series by the Method of Least Squares /Chebyshev Method/ and Tables for the Development of Equations of Parabolic Curves) 2d ed. Moscow, Gosstatizdat, 1959. 85 p. 3,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2444
Moscow. Gosudarstvennyy okeanograficheskiy institut
TRUDY, VYP. 47 (Transactions of the State Institute of Oceanography, Nr 47) Moscow, Gidrometeoizdat, 1959. 78 p. Errata slip inserted. 700 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2446
Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii
IZGOTOVLENIYE IZDELIY METODAMI POROSHKOVOY METALLURGII (The Manufacture of Products by the Methods of Powder Metallurgy) Moscow, Filial Vsesoyuznogo instituta nauchnoy i tekhnicheskoy informatsii, 1957. 23 p. (Series: Peredovoy nauchno-tekhnicheskiy i proizvodstvennyy opyt. Tema 4, No. M-57-320/3) 1,400 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2452
Akademiya nuak Ukrainskoy SSR. Otdeleniye tekhnicheskikh nauk
VOPROSY PROIZVODSTVA STALI, VYP. 4 (Problems in Steelmaking; Nr. 4) Kiyev, Izd-vo AN Ukrainskoy SSR, 1956. 163 p. 3,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2455
Dykhovichnyy, Abram Ionovich
STROITEL'NAYA MEKHANIKA; SOKRASHCHENNYY KURS (Structural Mechanics; Short Course) 3d ed., rev. Moscow, Ugletekhizdat, 1959. 342 p. 12,000 copies printed. 6p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2457
Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i

nauke. 2d, Moscow, 1957..
TEPLOTEKHNIKA I GIDRODINAMIKA; TRUDY KONFERENTSII, TOM. 4 (Heat Engineering and Hydrodynamics; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science, Vol 4) Moscow, Gosenergoizdat, 1958. 88 p. Errata slip inserted. 2,500 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2458
Akademiya nauk SSSR. Institut fiziki zemli
VOPROSY INZHENERNOY SEYSMOLOGII, VYP. 1 (Problems in Engineering Seismology, Nr 1) Moscow, Izd-vo AN SSSR, 1958. 129 p. (Series: Its: Trudy, no. 1/168/) 1,600 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-GER/2461
Hornauer, Wilhelm
INDUSTRIELLE AUTOMATISIERUNGSTECHNIK (Automation Techniques for Industry) 3d ed., rev. Berlin, VEB V.T., 1957. 193 p. Number of copies printed not given. Errata slip inserted. 6p. Microfilm $1.80 Photocopy $1.80

BR-GER/2462
Reuss, Paul
KAPAZITATSERMITTLUNG IN MASCHINENBAU-BETRIEBEN (Determining the Capacity of Machnie-building Plants) Berlin, VEB Verlag Technik, 1958. 324 p. (Series: Buchreihe Industrieokonomik, Bd. 4) Number of copies printed not given. 6p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2463
Kell', Nikolay Georgiyevich
IZMERITEL'NOYE DESHIFRIROVANIYE AEROSNIMKOV V POLEVYKH USLOVIYAKH (The Elements of Photogrammetric Measurements in Field Conditions) AN SSSR, 1959. 122 p. Errata slip inserted. 2,000 copies printed. 4p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2464
Akademiya nauk SSSR. Komitet po Meteoritam
SIKHOTE-ALINSKIY ZHELEZNYY METEORITNYY DOZHD', TOM 1 (Sikhote-Alin' Iron Meteorite Shower, Vol 1) Moscow, Izd-vo AN SSSR, 1959. 363 p. 1,200 copies printed. 2p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2474
Sil'chenko, Serafim Semenovich
GIDRAVLICHESKOYE OBORUDOVANIYE METALLOREZHUSHCHIKH STANKOV; POSOBIYE DLYA SLESAREY-REMONTNIKOV (Hydraulic Equipment of Metal-cutting Machine Tools; a Manual for Repairmen) 2d. ed., enl. Moscow, Mashgiz, 1958. 169 p. 10,000 copies printed. 2p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2476
Aliverdizade, K. S., A. A. Daniyelyan, V. I. Dokumentov, A. K. Ibatulov, V. O. Pakhlavuni, L. G. Chicherov, and S. V. Yurkevskiy
RASCHET I KONSTRUIROVANIYE OBORUDOVANIYA DLYA EKSPLUATATSII NEFTYANYKH SKVAZHIN (Design and Construction of Equipment for Oil Well Exploitation) Moscow, Gostoptekhizdat, 1959. 652 p. Errata slip inserted. 3,500 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-GER/2477
Fischer, Hans-Joachim
RADARTECHNIK /FUNKMESSTECHNIK/; GRUNDLAGEN UND ANWENDUNG (Radar Engineering /Radar/; Principles and Application) 2d rev. and enl. ed. Leipzig, Fachbuchverlag, 1958. 503 p. Number of copies printed not given. 6p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2484
Monich, Vladimir Kuz'mich
PETROLOGIYA GRANITNYKH INTRUZIY BAYANAUL'SKOGO RAYONA V TSENTRAL'NOM KAZAKHSTANE (Petrology of Granitic Intrusions of the Bayan-Aul Region in Central Kazakhstan) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1957. 523 p. 1,500 copies printed. 6p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2485
Lietuvos TSR mokslu akademija. Geologijos ir geografijos institutas
GEOGRAFINIS METRASTIS, I (The Geographical Yearbook I) Vilnius, 1958. 401 p. Errata slip inserted. 1,000 copies printed. 3p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2490
USSR. Vsesoyuznyy komitet standartov
UKAZATEL' GOSUDARSTVENNYKH STANDARTOV 1958 G.; PO SOSTOYANIYU NA I/I 1958 G. (Index of State Standards for 1958, as of January 1, 1958) Official edition. Moscow, Standartgiz, 1958. 520 p. Errata slip inserted. 30,000 copies printed. 6p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2495
Kartavov, Sergey Alekseyevich
OSNOVY RATSIONAL'NOGO PROYEKTIROVANIYA MASHIN (Fundamentals of Efficient Machine Designing) 2d ed. Kiyev, Gostekhizdat, USSR, 1958. 324 p. 3,000 copies printed. 3p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2502
Kershenbaum, Yakov Markovich
SMENA DOLOTA BEZ POD"YEMA BURIL'NOY KOLONNY (Replacing Rock Bits Without Lifting the Drill Column) Moscow, Gostoptekhizdat, 1959.

102 p. 2,700 copies printed. 2p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2505
Akademiya nauk Gruzinskoy SSR. Sovet po izucheniyu proizvoditel'nykh sil
PRIRODNYYE RESURSY GRUZINSKOY SSR. T. 2: NEMETALLICHESKIYE POLEZNYYE ISKOPAYE-MYYE (Natural Resources of the Georgian Soviet Socialist Republic. v. 2: Nonmetallic Mineral Deposits) Moscow, Izd-vo AN SSSR, 1959. 379 p. Errata slip inserted. 5,500 copies printed. 7p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2507
Fersman, Aleksandr Yevgen'yevich
OCHERKI PO MINERALOGII I GEOKHIMII (Studies in Mineralogy and Geochemistry) Moscow, Izd-vo AN SSSR, 1959. 198 p. (Series: Akademiya nauk SSSR. nauchno-populyarnaya seriya) 10,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2509
Vsesoyuznaya akusticheskaya konferentsiya. 4th, Moscow, 1958
REFERATY DOKLADOV (Abstract of Reports at the Fourth All-Union Acoustical Conference) Moscow, Izd-vo AN SSSR, 1958. 102 p. Errata slip inserted. 900 copies printed. 1p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2511
Fortunatov Nikolay Sergeyevich
KOMPLEKSNAYA PERERABOTKA SUL'FIDNYKH RUD /KONTSENTRATOV/ (Exhaustive Treatment of Sulfide Ores /Concentrates/) Kiyev, AN Ukrainskoy SSR, 1959. 182 p. 3,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2514
USSR. Komitet standartov, mer i izmeritel'nykh priborov.
ELEKTROIZMERITEL'NYYE PRIBORY (Electrical Measuring Instruments) Official Ed. Moscow, Standartgiz, 1959. 351 p. (Series: SSSR. Gosudarstvennyye standarty) Errata slip inserted. 5,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2521
Bernshteyn, Leonid Abramovich, and Mikhail Borisovich Frenkel'
BRANULYATSIYA TSEMENTNYKH SYR'YEVYKH SMESEY PRI SUKHOM I MOKROM SPOSOBAKH PODGOTOVKI (Granulation of Raw Cement Mixes by Dry-and-Wet-Processing Methods) Moscow, Gosstroyizdat, 1959. 98 p. 2,200 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2531
Dokunina, Natal'ya Aleksandrovna
METODY I SREDSTVA KONTROLYA GEOMETRICHESKIKH PARAMETROV V SAMOLETOSTROYENII (Methods and Means for Controlling Geometric Parameters in Aircraft Construction) Moscow, Oborongiz, 1959. 131 p. Errata slip inserted. 3,500 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2532
Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya
METODY KHIMICHESKOGO ANALIZA MINERAL'NOGO SYR'YA, VYP. 4 (Methods of Chemical Analysis of Mineral Raw Materials, Nr. 4) Moscow, Gosgeoltekhizdat, 1958. 66 p. Errata slip inserted. 2,000 copies printed. 2p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2534
Kapyrin, Pafnutiy Ivanovich, and Oleg Sergeyevich Sergeyev
V DUBNE POD MOSKVOY (At Dubna near Moscow) [Moscow] Moskovskiy rabochiy, 1958. 97 p. 25,000 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2535
Tarasevich, Nikolay Ivanovich
RUDOVODSTVO K PRAKTIKUMU PO VESOVOMU ANALIZU (Manual for Laboratory Practice and Gravimetric Analysis) [Moscow] Izd-vo Moskovskogo universiteta, 1958. 237 p. Errata slip inserted. 8,000 copies printed. 3p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2536
Moscow, Institut neftekhimicheskoy i gasovoy promyshlennosti
PROBLEMY NEFTI I GAZA (Oil and Gas Problems) Moscow, Gostoptekhizdat, 1959. 362 p. (Series: Its: Trudy, vyp. 24) Errata slip inserted. 2,000 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2538
Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze
ISSLEDOVANIYA V OBLASTI TEORETICHESKOY I PRIKLADNOY AERODINAMIKI; SBORNIK STATEY (Research in Theoretical and Applied Aero-and Hydrodynamics; Collection of Articles) Moscow, Oborongiz, 1959. 92 p. (Series: Its: Trudy, vyp. 111) 2,650 copies printed. 2p.
Microfilm $1.80 Photocopy $1.80

BR-SOV/2547
Leningrad. Glavnaya geofizicheskaya observatoriya
VOPROSY DINAMICHESKOY METEOROLOGII

(Problems in Dynamic Meteorology) Leningrad, Gidrometeoizdat, 1959. 91 p. (Series: Its: Trudy, vyp. 81) Errata slip inserted. 1,200 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2551
Smirnov, V. K., and Ye. S. Voshina
PROPITANNYY GRAFIT I YEGO PRIMENENIYE V KHIMICHESKOY PROMYSHLENNOSTI (Impregnated Graphite and Its Application in the Chemical Industry) Moscow, Goskhimizdat, 1959. 70 p. (Series: Korroziya v khimicheskikh proizvodstvakh i sposoby zashchity, vyp. 12) 3,500 copies printed. 3p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2570
Akademiya nauk SSSR. Energeticheskiy institut
VOPROSY VETROENERGETIKI (Problems in Wind Power Engineering) Moscow, Izd-vo AN SSSR, 1959. 135 p. Errata slip inserted. 1,700 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-POL/2574
Teisseyre, Jerzy
PROBLEMY I PERSPEKTYWY LOTNICTWA (Problems and Prospects of Aviation) Warszawa, Wiedza Powszechna, 1958. 272 p. Errata slip inserted. 5,253 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2592
Moscow. Tsentral'nyy institut prognozov
VOPROSY DINAMICHESKOY METEOROLOGII (Problems in Dynamic Meteorology) Moscow, Gidrometeoizdat, 1959. 69 p. (Series: Its Trudy, vyp. 86) Errata slip inserted. 900 copies printed. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2596
Zhileyko, Georgiy Ivanovich
RADIOTEKHNIKA I ELEKTRONIKA V USKORITELYAKH ZARYAZHENNYKH CHASTITS (Radio Engineering and Electronics in Particle Accelerators) Moscow, Gosenergoizdat, 1958. 60p. (Series: Massovaya radiobiblioteka, vyp. 317) 30,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2638
Zhukhovitskiy, Aleksandr Abramovich
MECHENYYE ATOMY (Tagged Atoms) Moscow, Voyen. Izd-vo M-va obor. SSSR, 1959. 112 p. (Series: Nauchno-populyarnaya biblioteka) Number of copies printed not given. 1p. Microfilm $1.80 Photocopy $1.80

BR-SOV/2646
Kulikov, Ivan Stepanovich
PRIMENENIYE RADIOAKTIVNYKH IZOTOPOV V METALLURGII I METALLOFIZIKE (Use of Radioactive Isotopes in Metallurgy and Phsyical Metallurgy) Moscow, 1958. 46 p. Errata slip inserted. 4,000 copies printed. 2p. Microfilm $1.80 Photocopy $1.80

TRANSLATIONS IN PROCESS

ANALYSIS OF THE RESULTS OF THE NATURE OBSERVATION CAMPAIGN.
Mono., Hydrographic Studies of the Post of Preak-Sihaouk, Part I.

BIBLIOGRAFIA: PRACE AUTORCW POLSKICH.
Nukleonika (Poland) 1957, v. 2, no. 1, p. 221-222.

CHINESE SUBMARINES PERFECT THEIR COMBAT SKILL.
Sovetskiy Flot (USSR) 1959, 20 July.

FLAGSHIP OF THE WHALING FLEET.
Morskoy Flot (USSR) 1959, v. 19, no. 1, p. 48.

KRONIKA WYDARZEN I WIADOMOSCI: INFORMACJE Z KRAJU.
Nukleonika (Poland) 1957, v. 2, no. 2, p. 373-380.

QUESTIONS CONCERNING CHINA'S TERRITORIAL SEA.
Unidentified Chinese People's Republic mono., Peking.

NEW CONSTRUCTIONS IN GERMAN SHIPYARDS.
Hansi (Germany) 1959, no. ?8/29, p. 1479.

SAHLGRENS HOSPITAL IN GOTENBURG: SWEDEN'S LARGEST HOSPITAL.
American-Swedish News Exchange, Inc. Radiogram from Sverige (USA) 1959, no. 39, p. 1.

VORONEZH ATOMIC POWER PLANT.
Promyshlenno-Ekonomicheskaya Gazeta (USSR) 1959, 23 Aug, p. 1.

Akhiezer, A. I. and Berestetskiy, V. B.
QUANTUM ELECTRODYNAMICS. 2d. ed.
Unknown mono.

Arkuszewski, M.
CZECHOSLOWACKO-POLSKA KONFERENCJA ENERGETYKOW JADROWYCH.
Nukleonika (Poland) 1957, v. 2, no. 1, p. 197-206.

Bobinska, K.
ODKRYCIE ANTYNEUTRONU.
Nukleonika (Poland) 1957, v. 2, no. 2, p. 347-349.

Broda, E.
NIEKTORE ZASTOSOWANIA RADIOWEGLA W CHEMII I BIOLOGII.
Nukleonika (Poland) 1957, v. 2, no. 3, p. 409-426.

Buja, Z., Oles, Andrzej, and Ostrowski, Kazimierz.
KONSTRUKSJA METALOWYCH LICZNIKOW GEIGERA MULLERA.
Nukleonika (Poland) 1957, v. 2, no. 2, p. 321-334.

Bulgakow, B. V.
APPLIED THEORY OF GYROSCOPES.
Mono., Prikladnaya Teoriya Giroskopov, Moscow, 1955, 355p.

Champeix, L. Darras, R., and Dufle, J.
OXYGEN TITRATION IN SODIUM. THE MERCURY METHOD AND ITS USE FOR VERY LOW VALUES.
Commissariat a l'Energie Atomique Rapport (France) no. 835.

Chudakov, A. E. and Gorchakov, E. V.
TERRESTRIAL CORPUSCULAR RADIATION.
Priroda (USSR) 1959, v. 48, Aug., p. 86-89.

Depraz, J.
ON THE SUBJECT OF SOME RESEARCH AND IMPROVEMENT OF HIGH FREQUENCY SOURCES OF HIGH OUTPUT.
Journal de Physique et le Radium (France) 1958, v. 19, p. 86-87.

Dmitriev, A. .
INTERNATIONAL MERCHANT MARINE CONFERENCES (FREIGHT CARTELS).
Morskoy Flot (USSR) 1959, v. 19, no. 1, p. 40-43.

Dokuchaev, V. P.
EFFECT OF THE TERRESTRIAL MAGNETIC FIELD ON WINDS IN THE INOSPHERE.
Akademiya Nauk SSSR. Izvestiya. Seriya Geofizicheskaya, 1959, no. 5.

Dubchak, V.
MORE ATTENTION IS GIVEN TO LOADING AND UNLOADING OPERATIONS IN TRANSPORTATION.
Morskoy Flot (USSR) 1959, v. 19, Jan. p. 4-5.

Frankowski, W.
PODSTAWOWE PROBLEMY ENERGETYSKI JADROWEJ.
Nukleonika (Poland) 1957, v. 2, no. 2, p. 225-265.

Golubev, V. V.
LECTURES ON INTEGRATION OF THE EQUATIONS OF MOTION FOR A HEAVY SOLID BODY AROUND A FIXED POINT.
Mono. Lektsiy po Integrirovaniyu Uraveniy Dvizheniya Tyazhelogo Tverdogo Tela Okolo Nepodvizhnoy Tochki, Moscow, 1953, 287p.

Grjebine, T., Moreau, R., and Olkowsky, B.
OBSERVATION OF PULSATIONS IN THE BEAM EMITTED BY A HIGH FREQUENCY SOURCE.
Journal de Physique et le Radium (France) 1958, v. 19, Jan.

Heeckt, H.
CHINA AND ITS NEW SHIPPING POLICY.
Seekiste (West Germany) 1959, no. 8, p. 654-657.

Holz, R. and Lob, H.
INVESTIGATIONS OF A HIGH FREQUENCY SOURCE.
Zeitschrift für Naturforschung (West Germany) 1958, v. 13a, no. 8, p. 602-608.

Janikowski, A.
STAN PRODUKCJI LICZNIKOW GEIGERA-MULLERA W POLSCE.
Nukleonika (Poland) 1957, v. 2, no. 3, p. 489-505.

Keldysh, M. V.
ON B. G. GALERKIN'S METHOD FOR THE SOLUTION OF BOUNDARY PROBLEMS.
Akademiya Nauk SSSR. Izvestiya. Seriya Matematicheskaya, 1942, v. 6.

Kochmanski, Tadeusz.
OUTLINE OF KRAKOWIANOS' CALCULATIONS.
Mono. Zarys Rachunku Krakowianowego, Warsaw, 1948, 46p.

Kuchowicz, B.
ROZKLAD LADUNKU W JADRZE ATONOWYM (NOWE METODY BADANIA).
Nukleonika (Poland) 1957, v. 2, no. 2, p. 335-346.

Nemchikov, V.
PLANNING MARITIME TRANSPORTATION IN THE POLISH PEOPLE'S REPUBLIC.
Morskoy Flot (USSR) 1959, v. 19, p. 41.

Myalikgulyev, G.
INVESTIGATION OF THE VARIATION OF ELECTRICAL RESISTANCE OF NICKEL-PALLADIUM ALLOYS IN A LONGITUDINAL MAGNETIC FIELD.
Akademiya Nauk Turkmenskoy SSR, Ashkhabad. Izvestiya, 1957, no. 3, p. 3-11.

Nazarov, I. N. and Makin, S. M.
SYNTHESIS OF ETHOXYISOPRENE.
Akademiya Nauk SSSR. Doklady 1957, v. 117, no. 5.

O'Connor, D.
SPEKTROMETROMETRIA PREDKICH NEUTRONOW.
Nukleonika (Poland) 1957, v. 2, no. 1, p. 1-8.

Perilhou, Pierre.
PARABOLIC REFLECTOR SYSTEM.
French Patent no. 928399, 26 Nov 1947.

Popovskiy, Mark.
THERAPEUTIC STEEL.
Nauka i Zhizn (USSR) 1959, no. 4, p. 17-21.

Radke, Hans-Ulrich.
DEVELOPMENT OF LUMINESCENCE DOSIMETER FOR X-RAYS.
Zeitschrift für Angewandte Physik (West Germany) 1957, v. 9, no. 4, p. 180-183.

Shafer, Kl.
THERMODYNAMICS AND STATISTICS OF BOUNDARY SURFACES.
Zeitschrift für Elektrochemie (West Germany) 1955, v. 59, no. 4, p. 233-245.

Skuridin, G. A.
DUHAMEL'S PRINCIPLE AND ASYMPTETIC SOLUTIONS OF THE DYNAMIC EQUATIONS FOR THE THEORY OF ELASTICITY, PART I.
Akademiya Nauk SSSR. Izvestiya. Seriya Geofizicheskaya, 1959, no. 1, p. 3-10.

Smishakov, N. A.
THE CAUSE OF THE ANTICORROSION EFFECT OF SODIUM NITRITE ON IRON.
Zhurnal Fizicheskoy Khimii (USSR) 1958, v. 32, no. 10, p. 2282-2286.

Sourine, G. and Marmain, J.
HERE ARE THE MEN AND FORMULAS THAT HELPED LAUNCH THE SPUTNIK.
Aviation Magazine (France) 1957, no. 238.

Spicyn, J.
PROBLEM ODPADOW PROMIENIOTWORCZYCH W TECHNICE WSPOLCZESNEJ.
Nukleonika (Poland) 1957, v. 2, no. 3, p. 451-463.

Sukhotin, A. M. and Kartashova, K. M.
ON THE PASSIVITY OF IRON IN HOT CONCENTRATED ALKALINE SOLUTIONS.
Zhurnal Fizicheskoy Khimii (USSR) 1958, v. 32, no. 9, p. 2068-2072.

Taube, M.
DWUTLENEK PLUTONU JAKO PALIWO JADROWE.
Nukleonika (Poland) 1957, v. 2, no. 3, p. 465-477.

Taube, M.
ROLA REAKTOROW PREDKICH POWIELAJACYCH W ROZWOJU ENERGETYKI JADROWEH.
Nukleonika (Poland) 1957, v. 2, no. 1, p. 9-30.

Zhuravlev, N. N. and Katsnolson, A. A.
AN X-RAY CAMERA FOR THE INVESTIGATION OF CRYSTALS AT TEMPERATURES RANGING FROM -175°C to 300°C.
Kristallografiya, Moscow (USSR) 1958, v. 3, no. 5, p. 632-634.

Zych, W.
AKCELERATORY.
Nukleonika (Poland) 1957, v. 2, no. 3, p. 427-449.

Zych, W.
AKCELERATORY.
Nukleonika (Poland) 1957, v. 2, no. 2, p. 267-320.

PERIODICALS TRANSLATED COVER-TO-COVER

Abstracts of Soviet Medicine $15.00/year
Part A. Basic Medical Sciences $15.00/year
Part B. Clinical Medicine
Order from:
Excerpta Medica Foundation, $25.00/year
2 East 103rd Street, (combined
New York 29, New York subscription)

Akademiya Nauk SSSR. Doklady.
[Biological Science Papers] (Proceedings of the Academy of Sciences of the USSR. Biological Science Papers)
Order From:
American Institute of Biological Sciences,
2000 P Street, N. W., $20.00/year
Washington 6, D. C.

Akademiya Nauk SSSR. Doklady.
[Botanical Science Papers] (Proceedings of the Academy of Sciences of the USSR. Botanical Science Papers)
Order from:
American Institute of Biological Sciences
2000 P Street, N. W., $7.50/year
Washington 6, D. C.

Akademiya Nauk SSSR. Doklady.
Otdel Biokhimii (Proceedings of the Academy of Sciences of the USSR. Biochemistry Section)
Order from:
American Institute of Biological Sciences,
2000 P Street, N. W., $15.00/year
Washington 6, D. C. $10.00/year*

Akademiya Nauk SSSR. Doklady.
Otdel Fizicheskoy Khimii (Proceedings of the Academy of Sciences of the USSR. Physical Chemistry Section)
Order from:
Consultants Bureau, Inc., $160.00/year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
Otdel Geokhimii (Proceedings of the Academy of Sciences of the USSR. Geochemistry Section)
Order from:
Consultants Bureau, Inc., $15.00/year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
Otdel Geologii (Proceedings of the Academy of Sciences of the USSR. Geology Section)
Order from:
Consultants Bureau, Inc., $200.00/year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
Otdel Khimicheskaya Tekhnologiya (Proceedings of the Academy of Sciences of the USSR. Chemical Technology Section)
Order from:
Consultants Bureau, Inc., $15.00/year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
Otdel Khimii (Proceedings of the Academy of Sciences of the USSR. Chemistry Section)
Order from:
Consultants Bureau, Inc., $110.00/year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
Otdel Prikladnoy Fiziki (Proceedings of the Academy of Sciences of the USSR. Applied Physics Section)
Order from:
Consultants Bureau, Inc., $200.00/year
227 West 17th Street,
New York 11, New York

Akademiya Nauk SSSR. Doklady.
[Physics Papers] (Proceedings of the Academy of Sciences of the USSR. Physics Papers)
Order from:
American Institute of Physics, $35.00/year
335 East 45th Street, $15.00/year*
New York 17, New York

Akademiya Nauk SSSR. Izvestiya.
Seriya Fizicheskaya (Bulletin of the Academy of Sciences of the USSR. Physics Series)
Order from:
Columbia Technical Translations, $215.00/year
5 Vermont Avenue,
White Plains, New York

Akademiya Nauk SSSR. Izvestiya.
Seriya Geofizicheskaya (Bulletin of the Academy of Sciences of the USSR. Geophysics Series)
Order from:
American Geophysical Union, $25.00/year
1515 Massachusetts Avenue, N. W.,
Washington 5, D. C.

Akademiya Nauk SSSR. Izvestiya.
Seriya Geologicheskiya (Bulletin of the Academy of Sciences of the USSR. Geology Series)
Order from:
Natonal Academy of Sciences--American
Geological Institute, $45.00/year
2101 Constitution Avenue, N. W., $27.00/year*
Washington 25, D. C.

*Subscription rate to libraries of academic institutions

Akademiya Nauk SSSR. Otdeleniya Khimicheskikh Nauk. Izvestiya (Bulletin of the Academy of Sciences of the USSR. Division of Chemical Sciences)
Order from:
Consultants Bureau, Inc., $45.00/year
227 West 17th Street, $15.00/year*
New York 11, New York

Akusticheskiy Zhurnal (Acoustics Journal)
Order from:
American Institute of Physics, $12.00/year
335 East 45th Street,
New York 17, New York

Antibiotiki (Antibiotics)
Order from:
Consultants Bureau, Inc., $25.00/year
227 West 17th Street,
New York 11, New York

Astronomicheskiy Zhurnal (Astronomical Journal)
Order from:
American Institute of Physics, $25.00/year
335 East 45th Street, $10.00/year*
New York 17, New York

Atomnaya Energiya (Atomic Energy)
Order from:
Consultants Bureau, Inc., $75.00/year
227 West 17th Street,
New York 11, New York

Atomnaya Energiya (Atomic Energy)
Selected papers incorporated in International Journal of Nuclear Energy, 3 volumes/year.
Order from:
Pergamon Press, Inc., $20.00/volume
122 East 55th Street, $ 9.80/volume
New York 22, New York to individuals

Avtomaticheskaya Svarka (Automatic Welding)
Order from:
British Welding Research Association
29, Park Crescent, $30.00/year
London, W.I., England

Avtomatika i Telemekhanika (Automation and Remote Control)
Order from:
Instrument Society of America, $30.00/year
313 Sixth Avenue, $15.00/year*
Pittsburgh 22, Pennsylvania

Biofizika (Biophysics)
Order from:
Pergamon Press, Inc., $30.00/year
122 East 55th Street,
New York 22, New York

Biokhimiya (Biochemistry)
Order from:
Consultants Bureau, Inc., $20.00/year
227 West 17th Street,
New York 11, New York

Byulleten' Eksperimental'noy Biologii i Meditsiny (Bulletin of Experimental Biology and Medicine)
Order from:
Consultants Bureau, Inc., $20.00/year
227 West 17th Street,
New York 11, New York

Byulleten' Izobreteniy (USSR Patents and Inventions)
Order from:
Pergamon Press, Inc., $100.00/year
122 East 55th Street,
New York 22, New York

Elektrichestvo (Electric Technology)
Selected papers
Order from:
Pergamon Press, Inc., $56.00/year
122 East 55th Street,
New York 22, New York

Electrosvyaz' (Telecommunications)
Order from:
Pergamon Press, Inc., $30.00/year
122 East 55th Street, $15.00/year to
New York 22, New York individuals

Entomologicheskoye Obozreniye (Entomological Review)
Order from:
American Institute of Biological Sciences,
2000 P Street, N.W., $25.00/year
Washington 6, D.C. $12.00/year*

Farmakologiya i Toksikologiya (Pharmacology and Toxicology)
Order from:
Consultants Bureau, Inc., $25.00/year
227 West 17th Street,
New York 11, New York

Fizika Metallov i Metallovedeniye (The Physics of Metals and Metallography)
Order from:
Pergamon Press, Inc., $30.00/year
122 East 55th Street, $15.00/year**
New York 22, New York

Fizika Tverdogo Tela (Solid State Physics)
Order from:
American Institute of Physics $55.00/year
335 East 45th Street, $25.00/year*
New York 17, New York

Fiziologicheskiy Zhurnal SSSR. im. I.M. Sechenova (I.M. Sechenov Physiological Journal)
Order from:
Pergamon Press, Inc., $45.00/year
122 East 55th Street,
New York 22, New York

*Subscription rate to libraries of academic institutions

**Subscription rate to members of cooperating and sponsoring societies of Acta Metallurgica

Fiziologiya Rastenii (Plant Physiology)
Order from:
American Institute of Biological Sciences,
2000 P Street, N. W., $15.00/year
Washington 6, D.C.

Geokhimiya (Geochemistry)
Order from:
The Geochemical Society, $20.00/year
c/o Dr. Earl Ingerson, $10.00/year
University of Texas,
Austin 12, Texas

Geologiya Nefti (Petroleum Geology)
Order from:
The Review of Russian Geology, $18.00/year
533 Harden Street,
Columbia, South Carolina

Izmeritel'naya Tekhnika (Measurement Techniques)
Order from:
Instrument Society of America, $25.00/year
313 Sixth Avenue, $12.00/year*
Pittsburgh 22, Pennsylvania

Kauchuk i Rezina (Soviet Rubber Technology)
Order from:
Maclaren & Sons Ltd. $50.00/year
131, Great Suffolk Street, $25.00/year*
London S.E., 1, England

Kemisk Maanedsblad og Nordisk Handelsblad for Kemisk Industri (Chemical Monthly Journal and Scandinavian Trade Journal for the Chemical Industry). Selected articles
Order from:
Erik Arnhem's Translation Service, $35.00/year
P. O. Box 46053
Hollywood 46, California

Kolloidnyy Zhurnal (Colloid Journal)
Order from:
Consultants Bureau, Inc., $80.00/year
227 West 17th Street,
New York 11, New York

Kristallografiya (Crystallography)
Order from:
American Institute of Physics $25.00/year
335 East 45th Street,
New York 17, New York $10.00/year*

Metallovedeniye i Termicheskaya Obrabotka Metallov (Metal Science and Heat Treatment)
Order from:
Henry Brutcher,
Technical Translations (not known)
P. O. Box 157,
Altadena, California

*Subscription rate to libraries of academic institutions

***Subscriptions of ASME members and members of affiliated societies in the United States, Canada, and Mexico handled by ASME and subject to 20% discount. All other subscriptions handled by Pergamon Press.

Metallurg (Metallurgist)
Order from:
Consultants Bureau, Inc., $95.00/year
227 West 17th Street,
New York 11, New York

Mikrobiologiya (Microbiology)
Order from:
American Institute of Biological Sciences,
2000 P Street, N. W., $20.00/year
Washington 6, D.C.

Optika i Spektroskopiya (Optics and Spectroscopy)
Order from: Optical Society members-Free
American Institute of Physics Non-members-
335 East 45th Street $25.00/year
New York 17, New York Foreign-$28.00/year

Pochvovedeniye (Soil Science)
Order from:
American Institute of Biological Sciences
2000 P Street, N. W., $40.00/year
Washington 6, D.C. $20.00/year*

Priborostroyeniye (Instrument Construction)
Order from:
Taylor and Francis Ltd. $17.10/year
Red Lion Court, Fleet Street, $ 8.55/year*
London, E.C. 4, England

Pribory i Tekhnika Eksperimenta (Instruments and Experimental Techniques)
Order from:
Instrument Society of America, $25.00/year
313 Sixth Avenue, $12.50/year*
Pittsburgh 22, Pennsylvania

Prikladnaya Matematika i Mekhanika (Journal of Applied Mathematics and Mechanics)
Order from:
Pergamon Press, Inc., $35.00/year***
122 East 55th Street,
New York 22, New York

Problemy Gematologii i Perelivaniya Krovi (Problems of Hematology and Blood Transfusion)
Order from:
Pergamon Press, Inc., $20.00/year
122 East 55th Street,
New York 22, New York

Radiotekhnika (Radio Engineering)
Order from:
Pergamon Press, Inc., $30.00/year
122 East 55th Street, $15.00/year
New York 22, New York to individuals

Radiotekhnika i Elektronika (Radio Engineering and Electronics)
Order from:
Pergamon Press, Inc., $45.00/year
122 East 55th Street, $22.50/year
New York 22, New York to individuals

Referativnyy Zhurnal. Geologiya (Abstract Journal. Geology)
Order from:
National Academy of Sciences-- $40.00/year
American Geological Institute, $24.00/year*
2101 Constitution Avenue, N. W.,
Washington 25, D. C.

Referativnyy Zhurnal. Metallurgiya (Abstract Journal. Metallurgy). Selected Abstracts.
Order from:
Pergamon Press, Inc., $20.00/year
122 East 55th Street, $10.00/year**
New York 22, New York

Sovetskaya Pedagogika (Soviet Education)
Order from:
International Arts and Sciences Press,
33 West 42nd Street, $70.00/year
New York 36, New York

Stal (Steel)
Order from:
The Iron and Steel Institute £20.12.0
4, Grosvenor Gardens
London, S. W. 1, England

Stanki i Instrument (Machines and Tooling)
Order from:
Production Engineering Research Association
of Great Britain £3.10.0/year
Melton Mowbray £4.4.0 for
Leicestershire, England overseas mailing

Steklo i Keramika (Glass and Ceramics)
Order from:
Consultants Bureau, Inc., $80.00/year
227 West 17th Street,
New York 11, New York

Svarochnoye Proizvodstvo (Welding Production)
Order from:
British Welding Research Association
29, Park Crescent £6.0.0/year
London, W. 1, England

Teoriya Veroyatnostey i Yeye Primeneniya (Theory of Probability and its Applications)
Order from:
Society for Industrial and Applied Mathematics,
Box 7541, $18.00/year
Philadelphia 1, Pennsylvania $ 9.50/year*

Tsement (Cement)
Order from:
Consultants Bureau, Inc., $60.00/year
227 West 17th Street,
New York 11, New York

Uspekhi Fizicheskikh Nauk (Progress of Physical Sciences)
Order from:
American Institute of Physics,
335 East 45th Street, $45.00/year
New York 17, New York $20.00/year*

Vestnik Mashinostroyeniya (Russian Engineering Journal)
Order from:
Production Engineering Research Association
Staveley Lodge £8.0.0/year
Melton Mowbray
Leicestershire, England

Voprosy Ekonomiki (Problems of Economics)
Order from:
International Arts and Sciences Press,
33 West 42nd Street, $50.00/year
New York 36, New York

Voprosy Onkologii (Problems of Oncology)
Order from:
Pergamon Press, Inc., $30.00/year
122 East 55th Street,
New York 22, New York

Voprosy Virusologii (Problems of Virology)
Order from:
Pergamon Press, Inc., $20.00/year
122 East 55th Street,
New York 22, New York

Zavodskaya Laboratoriya (Factory Laboratory)
Order from:
Instrument Society of America, $35.00/year
313 Sixth Avenue, $17.50/year*
Pittsburgh 22, Pennsylvania

Zhurnal Analiticheskoy Khimii (Journal of Analytical Chemistry)
Order from:
Consultants Bureau, Inc., $80.00/year
227 West 17th Street,
New York 11, New York

Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (Journal of Experimental and Theoretical Physics) Translation journal known as Soviet Physics-JETP
Order from:
American Institute of Physics, $75.00/year
335 East 45th Street, $35.00/year*
New York 17, New York

Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (Journal of Microbiology, Epidemiology and Immunobiology)
Order from:
Pergamon Press, Inc., $50.00/year
122 East 55th Street,
New York 22, New York

Zhurnal Neorganicheskoy Khimii (Russian Journal of Inorganic Chemistry)
Order from:
Cleaver-Hume Press Ltd. $90.00/year
31 Wright's Lane $67.50/year*
London, W. 8, England

*Subscription rate to libraries of academic institutions
**Subscription rate to members of cooperating and sponsoring societies of Acta Metallurgica

Zhurnal Obshchey Khimii (Journal of General Chemistry)
Order from:
Consultants Bureau, Inc., $90.00/year
227 West 17th Street, $30.00/year*
New York 11, New York

Zhurnal Prikladnoy Khimii (Journal of Applied Chemistry)
Order from:
Consultants Bureau, Inc., $60.00/year
227 West 17th Street, $20.00/year*
New York 11, New York

Zhurnal Tekhnicheskoy Fiziki (Journal of Technical Physics)
Order from:
American Institute of Physics, $35.00/year
335 East 45th Street, $25.00/year*
New York 17, New York

Zhurnal Vysshey Nervnoy Deyatel'nosti im. Pavlova (Pavlov Journal of Higher Nervous Activity)
Order from:
Pergamon Press, Inc., $30.00/year
122 East 55th Street,
New York 22, New York

*Subscription rate to libraries of academic institutions

AUTHOR INDEX

Author	Page
Abduyev, M. R.	no. 2, B-1
Abramov, V. V.	no. 2, B-1
Adel'skaya, F. S.	109
Agababov, S. G.	97
Ajello, T.	76
Akshentseva, A. P.	114
Aleksanyan, A. B.	70
Alekseyev, B. A.	92
Al'ftan, E. A.	119
Aliyev, V. S.	89
Alikperov, R. A.	66
Al'tman, N. B.	89
Anan'yev, M. G.	70
Anderson, E.	71
Andreyev, N. Kh.	102
Andreyev, P. A. BR-SOV/2608	no. 2, A-6
Andrusechko, V. I.	88
Anfilov, G.	121
Anosov, V. Y. BR-SOV/2806	no. 2, A-7
Antipin, D. N.	no. 2, B-1
Antoshina, N. V.	70
Antropov, P. Ya.	86
Aranovich, B. I.	92
Arbuzov, B. A.	76
Arbuzova, I. A.	76
Ardis, A. E.	76
Aronov, D. M.	104
Arndt, M.	92
Artsbashev, Ye. S.	no. 2, B-1
Ascher	67
Astapenko, M. G.	70
Astrup, T.	68
Auerswald, H.	70
Avsyuk, G. A.	no. 2, B-1
Ayzenberg, G. Z.	92
Babaev, N. N.	98
Baburina, A. N.	81
Badalov, R. A.	87
Bakulev, A. N.	70
Balabanova, V. N.	85
Balandin, A. A.	76
Baluyev, V. K. BR-SOV/2597	no. 2, A-6
Bamdas, A. M. BR-SOV/2467	no. 2, A-3
Band, I. M.	120
Band, I. M.	121
Bandow, K.	104
Bangert, L.	109
Bano, I. BR-SLOV/2481	no. 2, A-3
Baranov, A. I.	120
Baranov, V. G.	64
Barchukov, A. I.	123
Barskiy, S. Z.	87
Baru, R.	70

Author	Page
Barylko-Pikielna, N.	no. 2, B-1
Bashenin, V. A.	70
Basov, A. N.	104
Basov, N. G.	123
Baum, F. A.	66
Baumgartel, K.	102
Beati, E.	79
Becker, K.	112
Beer, F.	106
Belitskiy, G. Yu.	69
Belov, S. V.	no. 2, B-1
Belskaya, M. A.	no. 2, B-2
Berezin, I. V.	82
Berg, S.	119
Bergmann, A.	94
Berlin, A. A.	76
Berner, R.	122
Beznosikova, A. V.	123
Biberman, L. M.	122
Bibilashvili, N. Sh.	85
Bieniosek, C.	118
Birger, I. A.	107
Birman, I. B.	no. 2, B-1
Blagoy, Yu. P.	82
Blanter, M. E.	119
Blennemann, E.	81
Blyumenfel'd, L. A.	82
Bogoroditskiy, N. P.	93
Bollenrath, F.	114
Bolotovskiy, V. M.	68
Bondarenko, A. P.	122
Bondarev, K. T.	104
Boquet, P.	71
Borinshanskiy, V. M.	125
Borisov, V. V. BR-SOV/2391	no. 2, A-2
Borisovich, Yu. F.	64
Borodin, V. P.	65
Borodulin, G. M.	114
Borok, B. A.	119
Borum, K. BR-POL/2607	no. 2, A-6
Bosse, G.	93
Bourgeois, J.	98
Boyko, A. A.	64
Brana, V. BR-RUM/2449	no. 2, A-3
Brauer, P.	119
Braun	83
Braun, J.	79
Bredereck, H.	77
Brodskiy, K. A.	74
Brun, W.	98
Bruson, H. A.	76
Brzecka, K.	no. 2, B-4
Buchholz, H.	114
Buhler, H.	114

Author	Page
Bulgakova, N. V.	97
Burdukskiy, V. V. BR-SOV/2836	no. 2, A-7
Butoma, D. G.	102
Camera, E.	98
Cerny, E.	70
Chadayev, Y. Y. BR-SOV/2709	no. 2, A-7
Chaika, I. I.	115
Chekotillo, A. M.	no. 2, B-1
Cherkasov, B. A. BR-SOV/2540	no. 2, A-5
Chernobrovov, N. V. BR-SOV/2366	no. 2, A-2
Chernova, P. L.	109
Chernobrivkin, V. P.	109
Chernyshev, A. B.	77
Chuvayev, A. P.	85
Ciesla, E.	no. 2, B-1
Conradt, H. W.	122
Daniyel-Bek, V. S.	93
Danusso, F.	81
Danyushevskiy, Y. E. BR-SOV/2568	no. 2, A-5
Darling, S.	68
David, E.	125
Delauney, A.	71
Denisov, N. G.	126
Dente, M.	80
Dikenshteyn, G. Kh. BR-SOV/2678	no. 2, A-7
Dobrogurskiy, S. O. BR-SOV/2349	no. 2, A-2
Dobrzanski, B.	no. 2, B-7
Dokuchayev, V. P.	87
Dokunin, A. V.	93
Domanski, S.	no. 2, B-1
Dorogochinskiy, A. Z.	83
Doronin, N. A. BR-SOV/2716	no. 2, A-7
Dragunov, S. S.	77
Drozdova, N.	no. 2, B-2
Drzymanyan, Ye, A.	no. 2, B-4
D'yachkov, N. P. BR-SOV/2544	no. 2, A-5
Dyban, Y. P. BR-SOV/2684	no. 2, A-7
Dzieciolowski, W.	no. 2, B-1
Edstrom, J. O.	110
Egyazarov, G.	no. 2, B-2
Eickworth, E.	110
Einsele, U.	80
El'bert, B. Ya.	71
Elfmark, J.	103

Author	Page
Eliseyev, A. I.	86
Elldin, A.	94
Elpiner, I. Ye.	no. 2, B-2
Emelyanova, O. S.	86
Epsteyn, L. A.	99
Everse, J. W. R.	68
Eygenson, M. S.	66
Fal'kevich, E. S.	116
Fant, Augusto de	104
Farizov, M. Kh.	71
Fastovskiy, A. S. BR-SOV/2581	no. 2, A-6
Federighi, T.	119
Fedorov, Yu. V.	68
Fedorovich, Y. D. BR-SOV/2608	no. 2, A-6
Fedoseyev, D. N. BR-SOV/2749	no. 2, A-7
Fedosov, A. I.	83
Feldman, H. D.	181
Feygel'son, Ye. M. BR-SOV/2545	no. 2, A-5
Fiedler, R.	94
Filenko, R. A.	no. 2, B-2
Filippov, O. G.	77
Finkel'shteyn, A. I.	80
Firsov, N.	75
Fisz, M. BR-POL/2129	no. 2, A-1
Fok, V. A.	125
Fomin, Y. Y. BR-SOV/2501	no. 2, A-4
Feraboschi, F. P.	104
Frank-Kamenetskiy, D. A.	83
Franke, H.	71
Franzini, T.	94
Frappier, E.	115
Freydzon, I. R. BR-SOV/2390	no. 2, A-2
Frumkin, A.	83
Fuks, B. A. BR-SOV/2336	no. 2, A-2
Gaillard, P. J.	73
Gajos, E.	no. 2, B-4
Gal'perin, V. G. BR-SOV/2844	no. 2, A-8
Gan, V. N. BR-SOV/1721	no. 2, A-1
Garushev, A. R.	88
Gasior, E.	118
Gaydukov, M. G.	114
Gaydukov, Yu. A. BR-SOV/2581	no. 2, A-6
Gazarov, N. A.	94
Gel'fand, I. M. BR-SOV/2242	no. 2, A-2
Geminov, V. N. BR-SOV/2836	no. 2, A-7
Gerasimov, I. P.	no. 2, B-2
Gerzhoi, A. P.	no. 2, B-2
Giampaolo, C.	77
Gidrasov, M. S.	89
Ginzburg, V. L.	126
Glagolev, A. A.	87
Glatzer, G.	123
Glazova, K. S. BR-SOV/2545	no. 2, A-5
Glikman, L. A.	115
Glinkov, M. A.	114
Go, M. -Z.	126
Goercke, P.	124
Goethe, H. -G.	88
Gohr, H.	83
Golicke, R.	94
Golodnov, M. N.	100
Gompper, R.	77
Goncharenko, A.	106
Gorbunov, G. M BR-SOV/2391	no. 2, A-2
Gordeyev, P. V.	no. 2, B-2
Gordeyeva, M. N.	119
Gorokhov, N. S.	88
Gorpenyuk, N. A.	103
Gotfrid, F.	no. 2, B-2
Gotte, A.	89
Gozodova, G. E.	71
Grekh, I. F.	71
Gridnev, V. N.	120
Grigor'eva, V. V.	110
Grigor'yev, V. A.	83
Grosa, F.	80
Grossfuss, E.	114
Grubitsch, H.	110
Gruszecki, S.	no. 2, B-2
Guidini, C.	73
Gulyayev, A. P.	115
Guth, W.	108
Haas, F.	94
Hamada, S.	113
Hansel, H.	77
Hartmann	83
Hata, K.	107
Haugwitz, O.	94
Hauk, V.	114
Hauk, V.	115
Helling, W.	110
Hempel, M	117
Hesse, E.	119
Hevesy, G. v.	83
Hinz, W.	105
Hiorth, S.	83
Hofmann, E. E.	110
Holthusen, H.	121
Homes, G. A.	103
Homola, F.	100
Horejsi, M. BR-CZECH/2406	no. 2, A-2
Houssay, B. S.	71
Hudymenko, F. S. BR-SOV/2470	no. 2, A-3
Il'in, V. D. BR-SOV/2678	no. 2, A-7
Il'kun, G. M.	no. 2, B-4
Imshenetskiy, A. A.	68
Imyanitov, I. M.	85
Inchina, V. I.	67
Ioffe, S. B.	66
Irisova, N. A.	123
Isayeva, Ye. F.	76
Ivanchev, N. P.	111
Ivanchikov, V. I.	87
Ivanov, L. I.	111
Ivanov, Yu. V.	97
Ivanova, V. S. BR-SOV/2836	no. 2, A-7
Ivanova, Ye. N.	no. 2, B-2
Ivanyuk, G. I.	118
Iveronova, V. I.	123
Izraytel', N. A.	74
Jager, W.	112
Jaschke, F.	94
Jeanmaire	67
Jequier-Doge, E.	71
Jongh, S. E. de	73
Juchnowicz, I.	no. 2, B-2
Jung, E.	94
Jurga, F. BR-CZECH/2486	no. 2, A-3
Kabachnik, M. I.	77
Kagan, Yu. M.	126
Kaganowicz, I.	77
Kalasek, V. BR-CZECH/2526	no. 2, A-4
Kalinko, M. K.	86
Kalmanson, A. E.	82
Kalous, M.	78
Kalugin, V. I.	64
Kal'vinova, T. Ya.	126
Kamenev, P. N. BR-SOV/2584	no. 2, A-6
Kamenitser, S. Ye. BR-SOV/2581	no. 2, A-6
Kanayev, A. A. BR-SOV/2608	no. 2, A-6
Kand, M. Z.	no. 2, B-3
Kantner, C.	103
Kaplan, S. A.	66
Karamyan, A. I.	69
Karavayev, N. M.	89
Karnov, M. Ya.	111
Karpinski, J. J.	no. 2, B-2
Karpov, S. P.	71
Kartuzhanskiy, A. L.	106
Kasimova, N. P.	89
Kazanskaya, N. F.	82
Kazaryan, V. O.	no. 2, B-2
Kayesh, Yu. V. BR-SOV/2678	no. 2, A-7
Kaytmazov, S. D.	125
Kazakov, V. A. BR-SOV/2349	no. 2, A-2
Kereyev, N. I.	71
Keutgen, C. H.	78
Khar'kov, V. A.	88
Kheifets, M.	no. 2, B-2

Author	Page
Khenokh, M. A.	no. 2, B-2
Khenokh, M. A.	no. 2, B-3
Khenokh, M. A.	83
Khidekel, M. L.	76
Kholopova, Z. I.	96
Khomutov, M. V.	73
Khrutskiy, Ye. T.	64
Kibardin, Yu.	108
Kiselev, S.	88
Kistermann, E.	110
Klement'yev, S. D. BR-SOV/2475	no. 2, A-3
Kleytman, E. I.	68
Klimenko, V. N.	110
Klopova, Z. M.	65
Klyuenkova, E. I.	106
Klyuyev, L. V.	no. 2, B-4
Kobrinskiy, N. Y. BR-SOV/2616	no. 2, A-6
Koch, P. -A.	105
Koenig, F.	89
Kogan, B. Y. BR-SOV/2201	no. 2, A-1
Kogan, S. Ya. BR-SOV/2545	no. 2, A-5
Kokhanenko, P. N.	123
Kolach, T. A.	83
Kolbe, F.	115
Kolesov, S. G.	65
Kolgatin, N. N.	115
Kolomenskiy, A.	121
Kolosov, M. N.	81
Kolyaditskaya, L. S.	68
Kolyasev, F. Ye.	no. 2, B-2
Komarova, E. G.	79
Kondorskaya, N. I.	no. 2, B-3
Konikova, A. S,	68
Kontorovich, V. G. BR-SOV/2581	no. 2, A-6
Kopineck, H. J.	110
Kopineck, H. J.	115
Kopyt, A. D.	no. 2, B-2
Korecky, J. BR-CZECH/2405	no. 2, A-2
Koronatova, T. D. BR-SOV/2545	no. 2, A-5
Korotkov, A. A.	80
Koshelev, I. I.	97
Kosminskaya, T. K.	78
Kosolapova, T. Ya.	110
Kost, A. N.	78
Kostarev, V. V.	87
Koster, W.	111
Kosterin, S. I.	109
Koton, M. M.	81
Kovda, V. A.	no. 2, B-3
Krachter, H.	115
Krasikov, P. N.	86
Krasil'nikov, A. P.	74
Kreshchanovskiy, N. S.	115
Kretschmer, G.	96
Kreymer, G. S.	120
Krichevskiy, I. P.	83
Kritsman, M. G.	68
Krogius, F. V.	no. 2, B-3
Krokhin, E. M.	no. 2, B-3
Krokhin, Ye. M.	no. 2, B-3
Kroms, A.	120
Kroper, H.	81
Kryukov, S. I.	78
Kuchina, K. V.	68
Kuckhoff, A.	78
Kuhrt, F.	94
Kukurkin, Yu. L.	87
Kulalovskiy, V. B.	92
Kuleskov, P. I.	115
Kulik, M. M.	85
Kunert, K.	101
Kuranov, I. F.	88
Kurbasov, A. S.	101
Kuskov, V. K.	78
Kut'in, A. M.	78
Kuznetsova, M. A. BR-SOV/2545	no. 2, A-5
Kvapil, L. BR-CZECH/2526	no. 2, A-4
Kvasnikov, L. A. BR-SOV/2391	no. 2, A-2
Labova, Ye. V.	no. 2, B-2
Ladebeck, E. -H.	88
Lagidze, R. M.	78
Lambercier, M.	67
Lange, B.	127
Lange, E.	83
Lapinskaya, E. M.	83
Lapinskaya, Ye. M.	no. 2, B-3
Laporte, O.	126
Larin, A. A.	88
Latash, Yu. V.	103
Latil, M.	127
Layner, V. I. BR-SOV/2693	no. 2, A-7
Lazarenko, S. P.	102
Lazareva, E. P.	86
Lazukin, V. N.	124
Lechner, G.	105
Legradi	78
Lehmann, O.	119
Leiris, H. de	115
Lens, J.	68
Lepatnikova, Z. F.	74
Leshkovtsev, V. A. BR-SOV/2539	no. 2, A-4
Levanidov, L. P.	no. 2, B-3
Levanidov, V. Ya.	no. 2, B-3
Levantovskiy, V. I. BR-SOV/2539	no. 2, A-4
Levenberg, Ya. S.	96
Levich, V.	83
Levtyeva, L. S.	no. 2, B-3
Lieneweg, F.	103
Lihl, F.	116
Linde, H.	103
Lindner, R.	84
Lisitsyn, A. P.	no. 2, B-7
Lisitsyn, A. P.	no. 2, B-3
Litvin, D. F.	120
Lobanov, V. N.	65
Loladze, N. R.	78
Lopyrev, N. K.	120
Loubatieres, A.	72
Lozinskiy, M. G.	116
Lu, Chung-tsu BR-CHICOM/1939	no. 2, A-1
Lucas, H.	101
Lushkov, N. L. BR-SOV/2577	no. 2, A-5
Lutter, E. E.	73
Luzhnikov, L. P.	116
Lyapunov, A. A.	126
Lyashchenko, B. G.	120
Lysykh, T. S. BR-SOV/2522	no. 2, A-4
Lytkin, I. A.	89
Lyzhin, O. V. BR-SOV/2844	no. 2, A-8
Maaz, K.	94
Machacek, V. BR-CZECH/2524	no. 2, A-4
Machida, S.	107
Macura, J.	no. 2, B-3
Maderpki, S.	no. 2, B-3
Magaram, K. K.	81
Makashev, A. P.	no. 2, B-3
Maklevich, M. S. BR-SOV/2545	no. 2, A-5
Maksarev, Yu.	126
Maksimov, I.	66
Makurin, N. S.	99
Makushok, V. M.	74
Malcik, V.	70
Mamedov, G. A.	109
Mamontov, N. V.	86
Mandel'baum, M. M. BR-SOV/2544	no. 2, A-5
Marchevskiy, M. N. BR-SOV/2351	no. 2, A-2
Margolin, L. A.	123
Margolis, E. I.	75
Margolis, L. Ya.	84
Markelov, G. A.	66
Markov, K. K.	no. 2, B-1
Markov, N. I. BR-SOV/2391	no. 2, A-2
Marriot, J. G.	104
Marshak, A. L.	no. 2, B-3
Marten'yanova, K. V.	no. 2, B-4
Martinenghi, G. B.	78
Masanao, S.	120
Masevich, A. G.	66
Mashkov, A. K.	119
Mashkovskiy, M. D.	73

Author	Page
Massy, H.	63
Mastryukova, T. A.	77
Materanskoy, N.	no. 2, B-2
Matrosov, I. R.	no. 2, B-4
Matveyeva, M. K.	81
Matveyeva, M. K.	82
Matzke, H.	84
Mayorov, F. V. BR-SOV/2676	no. 2, A-7
Mazzei, A.	79
Medovar, B. I.	103
Medvedeva, L. I.	76
Meixner, J.	126
Mello, M. I.	68
Mel'nichenko, A. K.	74
Mel'nikov, A. A.	80
Mel'nikov, N. N.	78
Mel'nikova, N. P.	83
Menzel, H.	84
Merkulov, I. A.	98
Meshchaninov, I. A.	97
Michels, P.	101
Mikhanovskiy, Sh. P.	101
Mikhaylov, A. I. BR-SOV/2391	no. 2, A-2
Mikhaylov, N. A.	65
Mikhaylev, B. M.	78
Mikusiński, J. BR-POL/2493	no. 2, A-3
Mikutskiy, G. V. BR-SOV/2409	no. 2, A-2
Milin, V. B.	87
Mindlin, S. S. BR-SOV/2552	no. 2, A-5
Minin, G. P. BR-SOV/2450	no. 2, A-3
Minisci, F.	77
Minkevich, I. A.	72
Minkina, A. I.	no. 2, B-3
Minlos, R. A. BR-SOV/2242	no. 2, A-2
Mints, M. Z.	93
Mironov, L. V.	116
Mironova, A. N.	no. 2, B-3
Mironova, A. N.	83
Mogilnikov, V. S.	101
Moll, P. J.	111
Morachevskiy, A. G.	79
Morachevskiy, Yu. V.	119
Mordukhovich, M. I.	85
Morikawa, K.	89
Moroz, L. P.	124
Moshkov, A. D. BR-SOV/2520	no. 2, A-4
Mrochkov, K. A.	no. 2, B-4
Muchnik, G. F.	97
Muchnik, V. M.	85
Mueller, H.	80
Mukhacheva, V. A.	no. 2, B-4
Muller, P.	89
Munsterberg, O.	100
Mustel', E. R.	66
Murata, T.	116
Myaskovskiy, I. G. BR-SOV/2517	no. 2, A-4
Nabokov, V. A.	88
Nadezhin, V. M.	74
Nakamura, R.	120
Nakhimov, D. M.	116
Narduzzi, F.	80
Naryshkin, A. A.	111
Natapov, B. S.	116
Natta, G.	79
Natta, G.	81
Nawrocki, J.	no. 2, B-3
Nazarov, G. V. BR-SOV/2857	no. 2, A-8
Nechleba, M. BR-CZECH/2499	no. 2, A-4
Negro, F.	72
Nesmeyanov, A. N.	127
Neyman, M. B. BR-SOV/2601	no. 2, A-6
Neyshtadt, M. I.	86
Nielsen, O.	84
Niemann, G.	105
Nikandrova, G. T.	85
Nikitinskaya, L. V.	75
Nikolayenko, N. A. BR-SOV/2494	no. 2, A-3
Nikol'skiy, G. V.	no. 2, B-4
Niyazov, A. M.	79
Noreyko, L. M.	104
Normand, M.	63
Normant, H.	79
Novikov, Ye. A.	no. 2, B-4
Novikov, Yu. V.	no. 2, B-4
Novikova, V. M.	116
Novikova, Ye. I.	no. 2, B-4
Novoselova, A. V.	76
Oberländer, G.	100
Obtemperanskaya, S. I.	75
Oding, I. A. BR-SOV/2575	no. 2, A-5
Oding, I. A. BR-SOV/2836	no. 2, A-7
Ogielski, L.	no. 2, B-4
Ohmann, V.	98
Oiks, G. M.	113
Oleynichenko, V. I.	66
Onika, D. G.	93
Onyashvili, O. D.	90
Opfer, G.	110
Orishisk, K. P.	no. 2, B-4
Orlov, A. Ya.	no. 2, B-4
Orlov, N. A.	79
Osawa, A.	116
Osipov, B. D.	123
Osipov, B. D.	84
Ostrovskiy, A. P.	100
Ostrykau, M. S.	84
Overbeek, G. A.	73
Ozhiganov, I. N.	103
Pakhomau, S. I.	84
Paladzyan, V. A.	no. 2, B-2
Panich, B. I. BR-SOV/2494	no. 2, A-3
Panicheva, A. S.	112
Paschke, M.	103
Pasquon, I.	80
Pauradieu, G.	80
Pavlov, I. M.	111
Pavlushenko, I. S.	84
Pechatnov, A. V.	103
Pedersen, W.	95
Pegna, G.	98
Pekar, S. I.	124
Pekelis, V. D. BR-SOV/2616	no. 2, A-6
Penka, M.	no. 2, B-4
Perel'man, F. M. BR-SOV/2715	no. 2, A-7
Perepletchik, R.	no. 2, B-4
Perifil'yeva, I. A.	76
Petrosyan, S. L.	74
Petrov, G. S.	76
Petrov, I. V. BR-SOV/2678	no. 2, A-7
Petukhov, B. V.	95
Pflimlin, R.	72
Piaget, J.	67
Pilipenko, V. G.	72
Pil'skiy, I. Ya.	89
Pishchulin, G. A. BR-SOV/2581	no. 2, A-6
Pivonka, J. BR-CZECH/2525	no. 2, A-4
Plainevaux, J. E.	107
Plainevaux, J. E.	108
Plaksin, I. N.	89
Plate, A. F.	80
Pliszkowa, A.	no. 2, B-4
Ploger, U.	111
Plotzki, E.	117
Pluszynski, E.	no. 2, B-4
Pogrebnyak, P. S.	no. 2, B-4
Pokrovskiy, V. L.	95
Polonskiy, V. I. BR-SOV/1925	no. 2, A-1
Polynov, B. B.	no. 2, B-4
Pomp, A.	117
Pompon, L.	127
Ponomarev, A. N. BR-SOV/2605	no. 2, A-6
Ponomarev, K. I.	88
Popov, A. S.	122
Popov, G. A.	74
Popov, V. M.	68
Popova, G. L.	76
Porri, L.	79
Presnyakova, G. A.	no. 2, B-5
Prilutskiy, D. N.	no. 2, B-5

Author	Page
Pritulin, P. I.	65
Privezentsev, V. A.	65
	95
Proczkowski, A.	no. 2, B-2
Prokhorov, A. I.	72
Prokhorov, A. M.	123
	125
Prokhorov, N. N.	117
Prokof'yeva, I. A.	66
Pronyakova, G. V.	68
Prosvirkina, V. F.	76
Prusinkiewicz, Z.	no. 2, B-5
Prytkova, Z. I. BR-SOV/2626	no. 2, A-7
Pshenichnov, A. V.	69
Quilico, A.	77
Rabinovich, Ye. I.	117
Radchenko, V. D. BR-SOV/2471	no. 2, A-3
Rademacher, L.	117
Radicella, R.	120
Radkin, P. P.	72
Radomski, M.	no. 2, B-2
Ragulin, A. Ye.	no. 2, B-5
Rahmel, A.	112
Rakhlin, I. Y. BR-SOV/2539	no. 2, A-4
Rakov, K. A.	97
Rakova, G. V.	80
Raninskaya, Yu. L.	no. 2, B-5
Rass, T. S.	no. 2, B-5
Rath, H.	80
Ratner, A. V.	112
Raudanen, I. S.	126
Rauterkus, W.	115
Razdolin, M. V. BR-SOV/2602	no. 2, A-6
Razduy, F. I. BR-SOV/2577	no. 2, A-5
Rebrik, B. M.	99
Reher, C.	95
Reiss, L. BR-CZECH/2515	no. 2, A-4
Reitlinger, E. A.	75
Retting, H.	105
Reutov, O.	106
Richter, H.	97
Rieke, R.	104
Rigamonti, R.	80
Risch, W.	112
Rode, A. A.	no. 2, B-5
Rodriques, J.	120
Roginskaya, Ts. N.	80
Romankow, W.	no. 2, B-2
Romanov, V. V.	no. 2, B-5
Romu, V. G.	102
Rose, A.	117
Rosenthal, D.	103
Roslyakov, G. S. BR-SOV/2291	no. 2, A-2
Rossing, G. von	117
Rossum, L. van	121
Rostovtseva, M. S.	95
Roubleff, T.	80
Rozanov, A. N.	no. 2, B-5
Rozenblyum, S. G. BR-SOV/2582	no. 2, A-6
Rozov, N. M.	no. 2, B-4
Rubashkina, S.	no. 2, B-6
Rubensteyn, A. L.	no. 2, B-5
Rudenko, N. A.	82
Rukenshteyn, Ye.	84
Rumyantsev, N. P.	123
Ruszkowski	no. 2, B-2
Ryafov, V. F.	no. 2, B-5
Rybicka, K.	no. 2, B-5
Ryndin, V. A.	66
Sadovskiy, V. D.	114
Samochetov, V. F.	no. 2, B-2
Samsonova, A. P.	65
Safonava, O. S.	120
Safronov, Yu. V.	no. 2, B-6
Sagatovskiy, N. V.	86
Sahr, E. von	84
Saito, T.	120
Salin, A. A. BR-SOV/2590	no. 2, A-6
Samarina, O. P.	68
Samosatskiy, N. N. BR-SOV/2552	no. 2, A-5
Sargenti, L.	73
Sattler, J.	81
Savel, J.	95
Savini, E.	99
Savinskiy, K. A. BR-SOV/2544	no. 2, A-5
Savitskiy, E. M.	112
Savkin, A. M. BR-SOV/2581	no. 2, A-6
Saybel', A. G. BR-SOV/2503	no. 2, A-4
Scheil, E.	114
Schinn, R.	118
Schoberlein, W.	72
Schreiber, A.	89
Schreiber, W.	112
Schuck, H.	81
Schulz-Methke, H. D.	112
Schulz, H.	101
Schwab, G. -M.	123
Schwertassek, K.	105
Schwindt, K.	103
Seeger, A.	122
Seith, W.	83
Sejournet, J.	118
Semenenko, K. N.	76
Semenovskiy, A. V.	81
Semko, R. S.	no. 2, B-5
Sergeyevich, V. I.	84
Sergiyev, P. G.	88
Serkovskiy, V. A.	112
Serokhvotov, A. L.	114
Sevbo, P. I. BR-SOV/2528	no. 2, A-4
Severnyy, A. B.	66
Shabanov, D. A.	113
Shabat, B. V. BR-SOV/2336	no. 2, A-2
Shagan, O.	no. 2, B-6
Shamray, I. A.	86
Shapiro, Z. Y. BR-SOV/2242	no. 2, A-2
Shashin, M. Ya.	118
Shekht, N. I. BR-SOV/2544	no. 2, A-5
Shekhtman, Yu. M.	88
Shemyakin, M. M.	81
Sheng, P. -K	82
Sherstnev, K. M.	72
Shestakov, S. N.	111
Shevareva, T. P.	no. 2, B-6
Sheyman, B. M.	78
Sheynin, B. I.	109
Shiferson, M. M. BR-SOV/2582	no. 2, A-6
Shikhobalova, N. P.	no. 2, B-6
Shiryayev, I. Ye.	86
Shishkina, M. V.	79
Shklover, F. Ya.	105
Shklovskiy, I. S.	66
Shmidt, A. O. BR-SOV/2467	no. 2, A-3
Shmidt, O. Y. BR-SOV/2062	no. 2, A-1
Shmurygina, A. A.	68
Shorin, S. N.	97
Shorshorov, M. K. BR-SOV/2857	no. 2, A-8
Shpeyzman, V. M. BR-SOV/2577	no. 2, A-5
Shpigunov, F. A.	73
Shtrafun, Ya. N.	95
Shubin, N. I.	88
Shults, R. S.	no. 2, B-6
Shumskiy, P. A.	no. 2, B-1
Shur, A. B.	113
Shura-Bura, M. R. BR-SOV/2291	no. 2, A-2
Shvets, I. T. BR-SOV/2684	no. 2, A-7
Shvetsov, P. F.	86
Shvey, V. I. BR-SOV/2559	no. 2, A-5
Sianesi, D.	81
Sievert, G.	81
Sillano, P.	100
Simeonova, I. S.	116
Sinel'nikau, N. P.	84
Sineokov, G. N.	no. 2, B-6
Sivers, N. L.	99
Sixtus, K.	122
Skavronskaya, A. G.	69
Skebelskya, Yu. B.	73
Skorik, N. S.	96
Skryabin, K. I.	no. 2, B-6
Slavik, J.	96
Slavin, I. I.	122
Sliv, L. A.	120
	121
Sliwinski	no. 2, B-6
Smialowski, M.	118
Smit, V. A.	81

Author	Page
Sobolev, S. K.	113
Soborovskiy, L. Z.	82
Sogrishin, Yu. P.	113
Sokolov, S. D. BR-SOV/2471	no. 2, A-3
Sokolova, L. V.	73
Solny, B. BR-CZECH/2526	no. 2, A-4
Solopko, A. A.	no. 2, B-4
Solovev, V.	no. 2, B-6
Solov'yev, S. G. BR-SOV/2626	no. 2, A-7
Somov, V. A. BR-SOV/2467	no. 2, A-3
Souchkova, N. D.	107
Sovitskiy, P. S.	121
Spasskiy, A. A.	no. 2, B-6
Stamer, J.	107
Stanyukovich, K. P.	66, 67
Startsev, D. I.	no. 2, B-4
Stieglitz, A.	108
Stoltz, W.	101
Stolyarova, V. S.	65
Stratmann, M.	105
Stuart, H. A.	124
Stupel', F. A. BR-SOV/2362	no. 2, A-2
Strnad, J. BR-CZECH/2513	no. 2, A-4
Strugovshchikov, D. P. BR-SOV/2585	no. 2, A-6
Suchkov, A. B.	119
Sugano, S.	125
Sukhoprudskiy, N. D. BR-SOV/2471	no. 2, A-3
Suvorov, N. N.	73
Sypchuk, P.	90
Syroyeshkin, M. Ye. BR-SOV/2590	no. 2, A-6
Syurin, V. N.	69
Szoflarski, J.	no. 2, B-3
Takagi, T.	89
Talkenberg, W.	102
Tarasenkova, E. M.	79
Terent'yev, A. P.	75, 78, 81
Terent'yev, L. S.	82
Tereshchenko, M. P.	69
Terzi, V. P.	88
Timakov, V. D.	69
Timan, B.	126
Tishchenko, V. V.	79
Tithomolova, M. P.	81
Titov, A. I.	81
Titov, A. I.	82
Tix, A.	118
Tolstykh, A. S. BR-SOV/2581	no. 2, A-6
Tolvinskaya, Ye. V.	96
Tonn, W.	111
Torrud, E.	99
Trekalo, S. K.	113
Tribunskaya, A. Ya.	no. 2, B-6
Tifonov, N. P. BR-SOV/2291	no. 2, A-2
Tripolitova, A. A.	69
Trishevskiy, I. S. BR-SOV/2494	no. 2, A-3
Troitskiy, V. N. BR-SOV/2544	no. 2, A-5
Tselishchev, A. M.	72
Tsukernik, S. V.	96
Tsvetkov, V. N.	82
Tutov, V. K. BR-SOV/2349	no. 2, A-2
Tverskoy, P. N.	87
Tyurin, I. V.	no. 2, B-6
Tyutyumnikov, Yu. B.	90
Uchastkin, P. V. BR-SOV/2466	no. 2, A-3
Uchino, N.	107
Ulinich, F. R.	95
Ungewiss, A.	104
Uspenskiy, D. C.	121
Uspenskiy, Y. V. BR-SOV/2520	no. 2, A-4
Vachek, J.	96
Vaitekunas, A. A.	76
Vakhabova, Kh.	79
Vashnov, A. I.	96
Vavako, D.	65
Vivilov, N. I.	no. 2, B-6
Vedenskiy, A. P.	no. 2, B-6
Vedernikov, N. L.	no. 2, B-6
Veldman, A. R.	106
Velikovskiy, A. S.	88
Verkhovskiy, B. I. BR-SOV/2432	no. 2, A-3
Veseklov, F. S. BR-SOV/2581	no. 2, A-6
Veynik, A. I. BR-SOV/2542	no. 2, A-5
Viglino, A.	100
Villela, G. G.	68
Vinokurova, G. M.	76
Vitkevich, V. V.	87
Voigt, A.	120
Voitlander, R.	105
Volik, E. K.	87
Volodkovich, S. D.	78
Volz, F.	87
Vorobey, Z. F.	93
Voskresenskiy, A. D.	72
Voznesenskiy, B. N. BR-SOV/2626	no. 2, A-7
Vtorov, I. A.	122
Vyaznikov, N. F.	118
Waetzmann, E.	96
Walter, F.	105
Watanabe, H.	107
Waterman, H. I.	106
Wendt, W.	119
Wenzel, W.	113
Wiberg, I. M.	113
Wiebke, F.	119
Wiegand, H.	102
Wijmengu, H. G.	68
Wild	82
Winkler, F.	106
Wisniewski, W. L.	no. 2, B-6
Wolf, H.	122
Wolff, H.	72
Woll, A.	82
Wrezinska, E.	118
Yakubtsiner, N. M.	113
Yamauchi, Y.	113
Yanishevskiy, A. V.	84
Yashunskiy, V. G.	73
Yefremov, Yu. P.	124
Yefremova, G. D.	83
Yenyutina, R.	no. 2, B-6
Yermakov, V. V.	74
Yermolenko, N. V.	75
Yershov, V. S.	no. 2, B-1
Yerukhimovich, Yu. A.	92
Ygorova, N. F.	75
Yuvarov, G.	106
Zabludovskiy, I. Ye.	115
Zakamyrdin, I. A.	65
Zavalishin, A. A.	no. 2, B-2, no. 2, B-6
Zaretskiy, I. P.	72
Zaydel'son, M. I. BR-SOV/2678	no. 2, A-7
Zaynchkovskiy, Y. A. BR-SOV/2626	no. 2, A-7
Zehbe, I.	73
Zelawski, W.	no. 2, B-7
Zelikman, G. A.	96
Zelikman, V. L.	106
Zenkevich, V. B.	83
Zhdanov, A. P.	106
Zhdanov, G. P.	108
Zhirnov, D. F.	118

Author	Page
Zhivago, A. V.	no. 2, B-3
	no. 2, B-7
Zhogolev, Y. A.	
BR-SOV/2291	no. 2, A-2
Zhukovskiy, L. G.	
BR-SOV/2678	no. 2, A-7
Zhuze, T. P.	84
Ziemniczki, S.	no. 2, B-7
Ziener, T.	90
Zinov'yev, Yu. M.	82
Zverev, V. V.	95

SUBJECT INDEX

Subject	Page	Number
Acetates		
--Synthesis	80	59-20269
Acetylcholines		
--Physiological effects	73	59-18838
Acetylenes		
--Chemical reactions	78	ATS-75L35R
Acetylsalicylic acid		
--Production	73	60-10019
Acrylic resins		
--Polymerization	76	59-18752
Adrenal cortical extract		
--Physiological effects	73	59-20993
Aerodynamic heating	108	59-19702
Aircraft		
--Landing	108	59-19695
--Take-off	108	59-19695
Airplanes		
--Performance	88	59-17706
Alcohols		
--Synthesis	76	ATS-63L33I
	78	59-20680
Alkanes		
--Halogenation	82	ATS-81L35R
Alkylation	78	ATS-61L35R
Alloys		
--Mechanical properties	120	HB 4477
--Melting	113	HB 4616
--Phase studies	119	HB 4474
		HB 4479
--Properties	119	HB 4474
Althoff	88	59-17706
Alumina-silica		
--Catalytic properties	83	ATS-64L34R
Aluminum		
--Casting	110	MDF H-100
--Melting	110	MDF H-100
--Metallurgical effects	117	HB-4540
--Oxidation	112	60-10289
--Physical properties	119	ATS-02L35I
Aluminum alloys		
--Oxidation	112	60-10289
--Physical factors	113	HB 4484
--Processing	111	HB 4485
Aluminum chlorides		
--Catalytic properties	78	ATS-75L35R
Aluminum compounds		
--Catalytic properties	79	59-20931
Aluminum compounds (Organic)		
--Synthesis	78	ATS-19L35R
Aluminum-iron alloys		
--Mechanical properties	112	HB 4543
Aluminum-iron-manganese alloys		
--Phase studies	111	60-10067
Aluminum powders		
--Applications	113	HB 4623
Amidines		
--Synthesis	77	ATS-66L33G
Amines		
--Oxidation	76	60-10060
Amino acids		
--Chemical reactions	68	59-19740
Ammonia		
--Physical properties	84	59-20854
Ammonia-melamine systems		
--Phase studies	83	ATS-32L34R
Anemia		
--Therapy	71	60-10022
	72	59-20945
Animal industry		
--Albania	65	59-18305
--Switzerland	63	59-20160
--USSR	64	59-18308
		59-18309
	65	59-18306
Animals		
--Physiology	64	60-11006
		60-11010
	67	59-13608
Anthrax	74	59-31016
Anthrax vaccine		
--Pathological effects	65	59-19257
Antibodies (Labeled)		
--Applications	65	59-19681
Arc welds		
--Radiographic analysis	103	ATS-96L34F
Argon (Liquid)		
--Density	82	ATS-35L35R
Arsenic		
--Metallurgical effects	115	HB 4682
Arthritis		
--Pathology	70	59-13889
--Therapy	70	60-10025
	72	60-10024
Artifical precipitation		
--Production	85	ATS-57L34R
Atactic polymers	80	59-20935
Atmosphere		
--Temperature	85	59-13886
--Turbulence	87	59-11979
Atmospheric electricity		
--Measurement	87	59-16160
Atmospheric sounding	87	ATS-62L34R
Atomic energy		
--Applications	100	59-18957
--Development	120	60-10055
Atomic research		
--Periodicals	120	141 082T-21
--USSR	120	141 082T-21
Austenite		
--Decomposition	117	HB 4537
--Mechanical properties	115	HB 4475
Automotive industry		
--China	103	59-21150
Aviation personnel		
--Pathology	70	59-18428
Bacillus anthracis		
--Detection	65	59-19681

Subject	Page	Number
Bacterial toxins		
--Physiological effects	71	59-20999
Bactericides	87	59-19678
Bacteriophages		
--Development	68	59-19259
Banking		
--France	127	59-20159
Bearings		
--Productions	102	59-20558
Belts		
--Materials	101	59-18723
Benzene-cyclohexane-methanol systems		
--Phase studies	79	ATS-72L35R
Benzoic acids		
--Synthesis	76	RIS 95525
Beryllium oxides		
--Chemical reactions	76	59-19154
Bibliography		
--Electron tubes	91	59-22158
--Geophysical prospecting	86	ATS-44L35R
--Meteorology	85	60-11015
		69-11029
--Microwave tubes	91	59-22158
--Oceanography	85	60-11015
		60-11029
--Patents	63	RUSSIAN
--Science	63	SOVIET
--Scientific reports	63	59-21204
		LLU
Bile acids		
--Therapeutic effects	70	60-10016
	71	60-10014
	72	60-10015
Biology		
--Periodicals	67	BULLETIN
--USSR	67	BULLETIN
Birds		
--Parasites	68	59-19682
		59-19683
Blast furnaces		
--Operation	103	60-10038
	110	BISITS-1471
	113	HB 4664
Blennoid fishes	74	59-16366
Blood		
--Periodicals	67	PROBLEMS
Blood transfusions		
--Periodicals	67	PROBLEMS
Boilers		
--Design	97	59-19446
--Heat transfer	97	59-19813
		59-21203
--Operation	97	59-19625
		60-10288
--Temperature factors	97	59-19314
Boiling		
--Physical factors	125	59-19442
Boric acid esters		
--Chemical reactions	78	ATS-61L35R
Boron compounds (Organic)		
--Properties	79	ATS-90L35R
Brain		
--Physiology	69	59-13892
Brass		
--Temperature factors	113	59-20808
Breathing apparatus		
--Design	89	59-19751
Brick		
--Applications	90	59-22227
Brickwork panels	90	59-22227
Brightness meter	112	HB 4649
Broadband antennas		
--Design	92	59-31001
Bromine		
--Determination	75	ATS-01L35R
Bubbles		
--Motion	83	ATS-49L35R
--Photographic analysis	108	59-20942
Burns		
--Therapy	70	59-13919
Butadienes		
--Polymerization	79	59-20931
	80	60-10065
Butanetetrols		
--Separation	76	ATS-09L35F
--Synthesis	77	ATS-62L33R
Cables		
--Stresses	108	ATS-77L34R
Calanoida	74	59-16367
Calcium oxide-phosphorus pentoxide-silicon dioxide systems		
--Properties	84	ATS-86L34G
Calcium oxides		
--Applications	113	HB 4623
Camels	65	59-13899
Capacitors		
--Design	96	59-19456
Carbamates		
--Applications	89	59-20724
Carbon		
--Determination	75	ATS-81L34R
Carbon dioxide		
--Applications	85	ATS-59L34R
Carbon tetrachloride		
--Chemical reactions	76	59-19154
Carboxylic acids		
--Chemical reactions	82	ATS-02L36R
--Synthesis	76	ATS-43L35F
Cast steel		
--Temperature factors	118	BISITS-1421
Castings		
--Production	102	60-10053
	106	59-20803
Catalysts		
--Effectiveness	80	59-20935
--Production	89	ATS-30L35J
Catgut rings	67	60-10017
Caustic solutions	83	ATS-50L34R
		ATS-52L34R
Cavitation		
--Analysis	108	59-20942
Cellulose		
--Chemical reactions	80	59-20992
Cellulose acetates		
--Preparation	107	ATS-11L35J
Cellulose chemistry	107	ATS-11L35J
Cements		
--Periodicals	90	141 094T-9

Subject	Page	Number
Cements (Con.)		
--Production	90	141 094T-9
--USSR	90	141 094T-9
Ceramic materials		
--Processing	104	60-10031
Cereals		
--Culture	66	59-18277
Cheese		
--Production	99	59-20775
--Switzerland	63	59-20160
Chelate compounds		
--Therapeutic effects	73	59-13914
Chemical equilibrium		
--Analysis	77	ATS-28L35R
	83	ATS-40L35R
Chemical industry		
--Equipment	89	59-13985
Chemical waste		
--Processing	89	59-19749
Chemistry		
--Periodicals	75	59-13936
		59-13977
		59-13978
		141 074T-18
		BULLETIN
	121	141 051T-6
--USSR	75	141 074T-18
		BULLETIN
Chlorides		
--Spectrographic analysis	123	59-20858
Chlorine		
--Determination	75	ATS-01L35R
Chlortetracycline		
--Therapeutic effects	71	ATS-93L35R
Chromium		
--Diffusion	111	59-19155
Chromium carbides		
--Properties	110	HB 4706
Cibacron	78	ATS-92L35C
Cigarette	73	59-19748
Circulatory system		
--Pathology	71	59-20999
Clarifying plant	89	59-19749
Clouds		
--Analysis	85	ATS-59L34R
--Electrical properties	85	ATS-58L34R
Coal		
--Mechanical properties	93	59-18331
--Poland	93	59-18331
--Processing	109	141 063T-18
--Sintering	90	59-19324
--USSR	86	59-19818
	109	141 063T-18
Coal tar		
--Processing	89	59-19316
Cobalt		
--Therapeutic effects	72	59-20945
Cobalt-tungsten carbide alloys		
--Mechanical properties	120	60-10029
Coke		
--Applications	103	60-10038
--Standards	105	59-19623
Color photography		
--Development	105	60-10213
Communication systems		
--Periodicals	91	141 099T-16
	92	141 108T-17
		141 108T-18
--USSR	91	141 099T-16
	92	141 108T-17
		141 108T-18
		TELECOMMUNICATIONS
Complexons	73	59-13914
Conductors		
--Temperature factors	65	59-19165
Constructions		
--China	90	59-21978
--Materials	90	59-22227
Contact lenses		
--Design	123	59-19744
Containers		
--Processing	99	59-20331
Conveyors		
--Equipment	101	59-18723
Copper castings		
--Production	102	59-19437
Copper isotopes (Radioactive)		
--Nuclear reactions	120	60-10026
Copper ores		
--Separation	119	CEA-tr-A567
Copper oxides		
--Solvent extraction	119	CEA-tr-A567
Copper tubing		
--Production	102	59-19437
Copper-zinc alloys		
--Reflective effects	123	ATS-12L35R
Corrosion		
--Countermeasures	120	59-19134
--Measurement	119	BISITS-1479
Cosmic gas dynamics	66	MDF B-142
Cough	73	60-10068
Crankshafts		
--Fatigue	104	59-20599
Cresols		
--Synthesis	78	ATS-15L35R
Crustacea		
--Classification	74	59-16367
Crystals		
--Magnetic properties	125	59-17796
--Processing	124	60-10088
Curved mirrors		
--Coatings	123	59-19742
Cutting tools		
--Applications	107	59-20086
Cyanides		
--Separation	89	59-13913
Cybernetics	126	MDF L-125
Cyclic compounds		
--Chemical reactions	78	ATS-61L35R
		ATS-75L35R
Cyclohexanes		
--Chemical reactions	81	ATS-01L36R
	82	ATS-02L36R
--Oxidation	82	ATS-83L34R
Cyclopentadiene		
--Chemical reactions	78	ATS-05L35R
Cyclopentanes		
--Chemical reactions	80	60-10127

Subject	Page	Number
Cyclotron resonance	124	59-18518
Cylinders		
--Stresses	114	59-20589
Deficiency diseases	72	59-20977
Deodorants		
--Applications	77	59-20675
Desulfurization	113	HB 4623
Detergents		
--Foaming	82	60-10080
Deuterium		
--Exchange reactions	83	ATS-64L34R
Deuteron cross sections		
--Analysis	120	60-10026
Diabetes		
--Sources	71	59-20995
--Therapy	72	60-10002
Dielectrics		
--Theory	124	59-18516
Dies		
--Casting	109	HB 4483
--Performance	103	BISITS-1346
Diffusion		
--Analysis	83	ATS-94L34G
Diodes		
--Development	94	59-12023
--Materials	96	59-19811
Direction finders (RF)		
--Design	92	59-31001
Disinfectants		
--Applications	64	59-19267
	65	59-19268
	77	59-20903
Diving		
--Equipment	89	59-19751
Drilling machines		
--Development	100	ATS-71L34R
--Equipment	99	ATS-46L34R
--Operation	88	ATS-74L34G
	94	ATS-23L32R
--Performance	87	ATS-85L34R
Dyes		
--Test results	78	ATS-92L35C
Ear		
--Pathology	70	59-18428
Economic conditions		
--Analysis	127	59-20162
Education		
--USSR	69	59-31011
	70	59-31010
		59-31012
	71	59-31008
	72	59-19671
	74	59-13943
Electric arcs		
--Applications	109	59-16356
Electric cables		
--Production	95	ATS-76L34R
Electric currents		
--Measurement	94	59-16034
Electric fields		
--Geophysical factors	122	59-18523
Electric furnaces		
--Applications	113	HB 4679
Electric insulators		
--Design	91	59-18785
		59-19741

Subject	Page	Number
Electric machinery		
--Periodicals	92	141 107T-18
--USSR	92	141 107T-18
Electric motors		
--Applications	87	59-18642
--Failure	101	59-19153
--Insulation	92	59-18744
--Test methods	92	59-18744
Electric power production	93	ATS-02L33R
	95	59-19491
Electric relays		
--Mathematical analysis	92	59-18649
Electric switches		
--Materials	95	59-20923
Electric wire		
--Insulation	95	59-16189
Electrical engineering		
--Periodicals	92	141 109T-8
--USSR	92	141 109T-8
Electrical equipment		
--Temperature factors	95	59-20915
Electrodes		
--Coatings	102	60-10049
	103	HB 4669
Electrodrills	100	ATS-71L34R
Electroerosive machining		
--Physical effects	116	59-20585
Electrolytes		
--Thermodynamic properties	83	ATS-50L34R
--Viscosity	83	ATS-52L34R
Electromagnetic wave reflections		
--Theory	87	59-19488
Electromagnetic waves		
--Absorption	126	59-20262
--Diffraction	126	59-20681
--Oscillation	122	MDF P-136
Electron gas		
--Magnetic factors	124	59-18518
Electron tubes		
--Bibliography	91	59-22158
Electronic circuits		
--Development	91	59-19223
Electronic equipment		
--Theory	92	RADIO
--USSR	92	RADIO
Electrons		
--Scattering	122	MDF B-140
Eloxal process	112	60-10289
Embedding substances		
--Materials	105	59-20097
Embryos		
--Effects of radiation	74	59-13777
Encephalitis		
--Pathology	72	59-19684
Encephalitis viruses		
--Transmission	68	59-19674
		59-19682
		59-19683
Endothrydea	75	ATS-04L35R
Epidemiology		
--Siberia	71	59-19680
--USSR	69	59-31009
	70	59-31012

Subject	Page	Number
Esters		
--Polymerization	76	60-10063
Ethylenes		
--Polymerization	79	59-20985
Euglena	86	ATS-16L35R
Exhaust gases	122	59-16724
Exploding wire phenomenon	125	59-20621
Explosions		
--Analysis	83	ATS-40L35R
Explosives		
--Detonation	98	ATS-73L33G
--Production	98	59-20697
Eye		
--Pathology	72	59-20977
Fats		
--Processing	77	59-20675
Fatty acids		
--Purification	78	59-20786
--Separation	78	59-20788
--Test methods	81	60-10082
Feed water		
--Preparation	97	60-10288
Ferrites		
--Microstructure	120	HB 4477
Fibers		
--Chemical analysis	105	ATS-00L35G
Fibrin		
--Therapeutic effects	72	59-13924
Fishes		
--Classification	74	59-16366
--Ecology	74	59-20948
--Physiology	75	59-20949
--USSR	74	59-19669
Flade reference potential	83	ATS-24L33G
Fluid flow		
--Analysis	109	ATS-08L35R
--Boundary layer	83	ATS-91L34R
--Friction	109	59-19444
Foams		
--Testing equipment	82	60-10080
Foraminifera		
--Classification	75	ATS-04L35R
Formamides		
--Chemical reactions	77	ATS-66L33G
Foundries		
--Periodicals	102	141 130T-13
		141 130T-14
--USSR	102	141 130T-13
		141 130T-14
Free radicals		
--Magnetic properties	125	59-20791
Frequency meters		
--Design	94	59-18291
Frostbite		
--Therapy	72	59-13924
Fruits		
--Standards	63	59-20151
Furnace linings	110	MDF H-100
Fused quartz	104	ATS-97L34R
Galanthamine		
--Physiological effects	73	59-18838
Gallium-gold alloys		
--Properties	119	60-10084
Gamma radiation		
--Energy	120	59-12884
--Tables	120	59-12884
	121	AEC-tr-2888
Gas burners		
--Mathematical analysis	97	59-19315
Gas ionization		
--Theory	126	59-20213
Gas turbine blades		
--Design	100	59-18295
Gas turbines		
--Materials	114	60-21016
Gases		
--Chemical effects	83	59-20622
--Metallurgical effects	116	HB 4622
--Thermodynamic properties	66	MDF B-142
Gasoline		
--Development	104	ATS-07L35R
Gels		
--Dehydration	84	ATS-17L35W
Generators		
--Excitation	95	59-19166
Geocryology	86	59-13903
Geophysical prospecting	86	ATS-16L35R
--Bibliography	86	ATS-44L35R
--China	86	59-13921
Germanium compounds (Organic)		
--Microwave spectra	123	59-20855
--Spectrographic analysis	123	59-20858
Glass		
--Applications	118	59-20986
--Coatings	104	59-18782
Glass textiles		
--Electrical properties	105	ATS-36L35G
Glutathione		
--Metabolism	68	59-20994
Glycols		
--Chemical reactions	78	ATS-75L35R
Gold		
--Separation	89	59-13913
Grains (Metallurgy)		
--Boundary layer	120	HB 4477
Gyroscopes		
--Motion	98	59-21202
Hall generators	94	59-16034
Hammett equation	77	ATS-28L35R
Heat		
--Measurement	111	BISITS-1463
--Physiological effects	111	BISITS-1463
Heat resistant alloys		
--USSR	114	60-21016
Heat transfer		
--Mathematical analysis	97	59-21203
Heating elements		
--Design	94	60-10208
Herbicides		
--Effectiveness	66	59-18276
		59-18277
Herring	74	59-20948
	75	59-20949
High pressure research		
--Instrumentation	121	59-19483
Hoists		
--Equipment	87	59-18642
Humic acids		
--Chemical analysis	77	59-22379
--Properties	79	59-20895

Subject	Page	Number
Hydraulic fracturing	88	ATS-29L34R
		ATS-46L35R
		ATS-47L35R
		ATS-48L35R
Hydrides		
--Microwave spectra	123	59-20855
Hydrocarbons		
--Adsorption	84	ATS-99L34R
--Applications	93	ATS-02L33R
--Chemical reactions	78	ATS-61L35R
--Purification	90	ATS-62L35F
Hydroelectric power systems		
--Periodicals	90	141 091T-19
--USSR	90	141 091T-19
Hydrogen		
--Determination	75	ATS-81L34R
--Exchange reactions	83	ATS-64L34R
--Metallurgical effects	115	HB 4539
--Separation	80	60-10127
Hydrogen bonding		
--Spectrographic analysis	123	ATS-82L33G
Hydrogen fluoride		
--Handling	90	60-10265
Hydrogen sulfides		
--Spectra	125	59-20791
Hydrogenation		
--Velocity	76	60-10064
Hydrology		
--Periodicals	85	141 045T-21
--USSR	85	141 045T-21
Hygrometers		
--Applications	103	59-20941
Hypersonic flow		
--Ionizing effects	108	59-19702
Ice		
--Physical properties	86	ATS-61L34R
Induction motors		
--Vibration	101	59-18630
Industrial medicine		
--USSR	71	59-13918
Industrial noise	122	59-16724
		59-16725
		59-16726
Industrial plants		
--Physical factors	103	59-20941
Industrial production		
--Physiological factors	67	60-10054
--Standards	102	60-10053
Infants		
--Physiology	67	59-13894
Infections		
--Therapy	71	60-10014
Infrared equipment		
--Military requirements	123	60-13034
Insecticides		
--Properties	78	ATS-05L35R
Insects		
--Periodicals	74	60-11024
Instruments		
--Periodicals	102	141 118T-2
--USSR	102	141 118T-2
	121	141 120T-9
Insulating tapes		
--Dielectric properties	96	59-19164
Insulator chains	91	59-18785
		59-19741

Subject	Page	Number
Interferometers		
--Applications	124	59-18124
Internal conversion coefficients	120	59-12884
Intrinsic factor	68	59-20975
Inventions		
--Periodicals	102	141 014T-11
--USSR	102	141 014T-11
Ion exchange resins		
--Applications	89	59-13913
Ionones		
--Chemical reactions	81	ATS-45L35R
--Synthesis	81	ATS-45L35R
Ionosphere		
--Motion	87	59-21200
--Theory	87	59-19488
Ions		
--Thermodynamic properties	126	59-20213
Iron		
--Deformation	116	HB 4476
--Diffusion	111	59-19155
--Magnetic properties	118	HB 4480
--Microstructure	120	60-10037
--Passivity	83	ATS-24L33G
--Processing	118	HB 4480
--Solubility	110	59-20451
Iron (Liquid)		
--Processing	113	HB 4623
Iron castings		
--Production	103	59-18735
Iron industry	111	BISITS-1463
	115	BISITS-1365A
--Periodicals	109	141 063T-18
Iron-molybdenum alloys		
--Oxidation	112	BISITS-1465
--Temperature factors	112	BISITS-1465
Iron-nickel alloys		
--Crystal structure	120	59-14900
--Magnetic properties	122	60-10074
Iron ores		
--Germany	117	59-20987
--Processing	113	HB 4615
--Reduction	110	HB 4638
	113	HB 4679
Iron-silicon alloys		
--Phase studies	116	60-10040
Isoprene		
--Polymerization	80	60-10065
Joints		
--Tensile properties	107	60-10216
Jominy end quench test	117	59-20847
Kirchhoff-Young theory	126	59-20681
Lead		
--Recovery	111	59-20371
Linoleic acid		
--Isomerism	80	59-20655
Linotype	100	60-10222
Liquids		
--Surfaces	84	ATS-98L34R
--Vaporization	84	59-18678
Listeria		
--Culture	69	59-19679
Liver extract		
--Physiological effects	68	59-20994
--Therapeutic effects	71	60-10022

Subject	Page	Number
Liver extract (Con.)		
--Test methods	73	60-10023
Lubricants		
--Materials	111	HB 4678
	118	59-20986
--Testing equipment	105	ATS-55L35G
Lubricating oils		
--Testing equipment	105	60-10263
Lurgi-type	115	HB 4718
Machine translations		
--USSR	126	MDF L-125
Machines		
--Design	100	59-17875
	101	BISITS-1392
--Periodicals	102	141 118T-2
--USSR	89	59-13985
	102	141 118T-2
Magnesium alloys		
--Aging	111	HB 4544
--Heat treatment	111	HB 4544
--Mechanical properties	111	HB 4544
--Welding	102	HB 4545
	119	60-10204
Magnetic detectors		
--Applications	120	59-17113
Magnetic particle testing	120	59-17113
Magentic resonance		
--Measurement	125	59-20791
Magnos	83	CEA-tr-A552
Man		
--Physiology	67	59-13608
Materials		
--China	90	59-12978
--Test methods	120	59-17113
Mathematical computers		
--Applications	72	59-31020
	126	MDF L-125
Mathematics		
--Periodicals	107	141 035T-5
	121	141 051T-6
--USSR	107	141 035T-5
Measurement		
--Standards	121	NRCC C-3137
Mechanics		
--Periodicals	107	141 019T-13
		141 019T-15
--USSR	107	141 019T-13
		141 019T-15
Medical personnel		
--USSR	64	59-31022
Medical research		
--Instrumentation	72	59-31020
--Periodicals	67	BULLETIN
--USSR	67	BULLETIN
	70	59-13954
		59-31010
		59-31021
	71	59-13918
Medicine		
--Study and teaching	72	59-19671
--USSR	70	59-31010
	71	59-31008
Metal films		
--Conductivity	104	59-18782
Metal oxides		
--Catalytic properties	84	ATS-99L34R
--Dielectric properties	104	60-10287
--Physical properties	104	60-10287
Metallic soaps		
--Properties	78	59-20789
Metallurgy		
--Periodicals	109	ABSTRACTS
--USSR	109	141 063T-18
		ABSTRACTS
Metals		
--Chemical reactions	83	59-20622
--Cleaning	120	60-10264
--Crystal structure	122	ATS-32L35G
	123	59-20894
--Melting	109	59-16356
	113	HB 4616
--Metallurgical effects	115	HB 4542
--Optical properties	112	HB 4649
--Phase studies	109	60-13007
	119	HB 4479
--Properties	112	BISITS-1415
--Spectra	123	59-20894
--Surface properties	112	HB 4649
Meteorological instruments		
--Development	85	59-13886
Meteorological radar		
--Applications	85	ATS-63L34R
	87	ATS-62L34R
Meteorology		
--Bibliography	85	60-11015
		60-11029
--Periodicals	85	141 045T-21
--USSR	85	141 045T-21
	86	59-31019
Meteors		
--Aerodynamic characteristics	67	59-20920
Methanes		
--Synthesis	77	59-18379
Methyl iodides		
--Spectra	123	59-20859
Methyl iodides (Labeled)		
--Spectra	123	59-20856
Microbiology	64	59-19673
--USSR	68	59-19265
	69	59-31011
Microorganisms		
--Mutations	69	59-19269
Microphones		
--Design	96	60-10269
Microtomes		
--Applications	105	59-20097
Microwaves		
--Scattering	84	59-20854
Milk		
--Switzerland	63	59-20160
Millet	66	59-18277
Minerals		
--China	86	59-13921
Mining engineering		
--Equipment	87	59-18642
--Germany	88	ATS-74L34G
--Poland	93	59-18331
--USSR	88	ATS-84L34R
Missiles		
--Oscillation	98	59-21202

Subject	Page	Number
Miyagawanella		
--Physiology	68	59-13836
Molding powers	106	59-20803
Molecular distillation	84	59-18678
Molybdenum sulfides		
--Applications	111	HB 4678
Monomolecular films		
--Applications	80	59-20767
Moon rocket	97	59-16410
Motor starters		
--Development	100	59-18712
Multichannel telephone systems		
--Circuits	94	59-20523
Muscles		
--Physiology	73	59-18838
Naphthalenes		
--Chemical reactions	77	60-10090
Naphthalenesulfonic acid		
--Determination	81	59-17812
--Synthesis	82	59-17143
Natural gas		
--Applications	97	59-19315
--Siberia	86	59-13922
Nervous system		
--Physiology	69	59-11792
Nickel isotopes (Radioactive)		
--Nuclear reactions	120	60-10026
NIISI polyvaccine	73	59-19675
Nitrates		
--Detonation	98	ATS-73L33G
Nitrides		
--Determination	118	BISITS-1202
Nitrogen (Liquid)		
--Density	82	ATS-35L35R
Nitroglycerin		
--Nitration	98	59-20697
Noise		
--Measurement	122	59-16726
--Reduction	122	59-16724
		59-16725
Nucleic acids		
--Electron transitions	82	59-21201
Oceanography		
--Bibliography	85	60-11015
		60-11029
--USSR	84	59-13907
--White sea	74	59-20948
Octanes		
--Combustion	104	ATS-07L35R
Oil-field waters	84	ATS-70L34R
Oils		
--Processing	89	ATS-30L35J
--Purification	78	59-20788
Open hearth furnaces		
--Operation	112	BISITS-1396
Optical images		
--Theory	124	59-20835
Optics		
--Periodicals	123	OPTICS
--USSR	123	OPTICS
Ores		
--China	86	59-13921
--Separation	89	59-20724
Organic acids		
--Synthesis	77	60-10090

Subject	Page	Number
Organic compounds		
--Chemical analysis	75	ATS-01L35R
--Chemical reactions	76	ATS-37L35R
--Determination	80	ATS-86L33R
--Molecular structure	76	60-10064
Organic halides		
--Chemical reactions	77	ATS-66L33G
Otorhinolaryngology	70	59-18428
Oximeters		
--Design	83	CEA-tr-A552
Oxygen		
--Determination	114	BISITS-1487
--Metallurgical effects	112	BISITS-1396
	120	60-10037
Oxygen (Liquid)		
--Density	82	ATS-35L35R
Paper		
--Properties	107	60-10138
Paper capacitors	107	60-10138
Parachute jumping		
--USSR	75	59-18440
Parachutes		
--Design	88	59-21033
Particle trajectories		
--Recording devices	121	59-20571
Particles		
--Energy	121	59-20485
--Measurement	86	ATS-61L34R
--Transportation	99	59-19758
Particles (Airborne)		
--Precipitation	114	HB 4699
	115	HB 4718
Particulate filters		
--Effectiveness	73	59-19748
Pasta filata	99	59-20775
Pasteurella		
--Culture	68	59-19259
--Detection	68	59-19677
--Preservation	86	59-19255
--Properties	69	59-19256
Patents		
--Bibliography	63	RUSSIAN
--USSR	63	RUSSIAN
Pathology		
--Periodicals	69	60-11020
Peat		
--Decomposition	79	59-20895
Pelletizing	110	HB 4638
Peracon	73	60-10068
Periodicals		
--USSR	63	59-21204
		SOVIET
Permafrost		
--USSR	86	59-13903
Petroleum		
--Decomposition	79	60-10077
	89	59-19447
--Production	88	ATS-29L34R
		ATS-46L35R
		ATS-47L35R
		ATS-48L35R
		ATS-89L34R
--Siberia	86	59-13922
--Temperature factors	89	59-19447
Pharmacology		
--Periodicals	73	60-11021

Subject	Page	Number
Pharmacology (Con.)		
--USSR	73	59-13890
	74	59-13943
Phosphines		
--Chemical reactions	76	ATS-37L35R
Phosphorus compounds (Organic)		
--Isomerism	77	ATS-28L35R
--Synthesis	82	ATS-81L35R
Photoelectric cells		
--Applications	127	60-10214
Photoelectric fuzes		
--Design	91	59-18282
Photoelectric recordings	124	59-18124
Photoflash bulbs		
--Materials	127	59-16173
Photographic emulsions		
--Preparation	106	ATS-54L35R
--Sensitivity	106	60-10061
Photographic plates		
--Coatings	105	59-19814
--Processing	105	60-10213
Physical chemistry		
--Periodicals	82	141 064T-9 COLLOID PROCEEDINGS
--USSR	82	141 064T-9 COLLOID PROCEEDINGS
Physics		
--Instrumentation	121	141 120T-9
--Periodicals	121	60-11031
		141 051T-6
		141 120T-9
	125	141 049T-18
		141 049T-19
--Theory	125	Fok
--USSR	121	141 120T-9
	125	141 049T-18
		141 049T-19
Pipes		
--Production	111	HB 4678
--Rupture	115	HB 4539
Pituitary extract		
--Therapeutic effects	72	60-10024
Pituitary hormones		
--Pathological effects	71	59-20995
Plague		
--Pathology	65	59-13899
Plants		
--Physiology	65	59-13973
Plasma (Physics)	66	MDF B-142
	125	59-20791
	126	59-20262
		59-20263
		ATS-85L33R
Plasticity		
--Theory	107	ATS-77L35R
Plastics		
--Applications	104	60-10031
	106	59-21096
		59-21103
--Materials	106	59-21104
--Mechanical properties	106	59-20826
--Tensile properties	106	ATS-82L35G

Subject	Page	Number
Plastics industry		
--USSR	106	59-21103
Plywood		
--Processing	107	59-20086
Polymers		
--Crystal structure	124	59-20778
--Molecular weight	80	59-20935
--Properties	80	59-20767
--Test methods	106	59-20826
Potassium dichromate		
--Applications	103	HB 4669
Powder metallurgy	110	HB 4706
Power plants		
--Equipment	97	59-19315
--Periodicals	96	141 084T-20
--USSR	96	141 084T-20
Precipitation		
--Detection	85	ATS-63L34R
Printing		
--Equipment	100	60-10222
Procion	78	ATS-92L35C
Progesterone		
--Synthesis	73	59-18481
Projectiles		
--Design	98	59-16844
Propellers (Marine)		
--Theory	99	59-19819
Propene polymers		
--Molecular weight	79	60-10091
--Synthesis	79	60-10091
Propenes		
--Polymerization	80	59-20935
Proteins		
--Chemical reactions	68	59-19740
--Physical factors	83	ATS-20L35R
--Spectra	82	59-21201
Prothrombin		
--Synthesis	68	60-10098
Proton tube	94	59-12023
Proximity fuzes		
--Design	91	59-18282
Public health		
--USSR	69	59-31009
	70	59-13954
	72	59-13888
Puerperal infection		
--Therapy	70	60-10016
	71	60-10014
	72	60-10015
Pulse communications systems		
--Development	93	59-20918
Pumps		
--Design	100	59-19755
Pyridine derivatives		
--Properties	78	59-20727
Quartz		
--Applications	104	ATS-97L34R
Quinocide	71	59-18841
Rabbits		
--Pathology	65	59-18303
Radiation		
--Measurement	121	NRCC C-3137
--Pathological effects	74	59-13777
		59-31016
Radiation meters		
--USSR	121	5931000

Subject	Page	Number
Radio astronomy		
--Applications	87	59-21200
--USSR	66	59-19481
Radio equipment		
--Analysis	90	MDF ABCON-1
Radio transmitters		
--Equipment	94	60-10097
Radio waves		
--Propagation	126	59-20263
Radioactive recoil	83	ATS-94L34G
Raman spectra	123	ATS-82L33G
Recoil	83	ATS-94L34G
Rectifiers		
--Development	96	59-19811
--Materials	95	59-19166
Refractory materials		
--Development	104	ATS-97L34R
Reinforced concrete		
--Processing	104	59-19756
Resins		
--Applications	106	59-20803
Resistors		
--Electrical properties	93	59-18656
Respiratory diseases		
--Therapy	73	60-10068
Rheumatism		
--Pathology	70	59-13889
Rock		
--Analysis	87	59-17503
--Mechanical properties	87	ATS-53L34R
	94	ATS-23L32R
Rocket propellants		
--Development	100	59-18957
Rocket research		
--USSR	98	59-19475
Rods		
--Mechanical properties	117	59-20573
--Stresses	114	59-20593
--Tensile properties	107	60-10216
Roentgen	121	NRCC C-3137
Roller bearings		
--Deformation	101	59-20845
--Design	101	59-20581
--Surfaces	102	59-20578
Rolling mills		
--Equipment	101	59-20581
Rubber		
--Periodicals	104	141 057T-15
--USSR	104	141 057T-15
Rural areas		
--Economic aspects	127	59-20159
		59-20162
Satellite vehicle research		
--USSR	97	59-16410
Satellite vehicles		
--USSR	97	59-19492
	98	59-19475
Science		
--Bibliography	63	SOVIET
--Periodicals	126	141 015T-41
--USSR	126	141 015T-41
Scientific research		
--China	126	59-19507
		131 891T-33
		131 891T-34
--USSR	126	59-19439
Scientific research (Con.)		
--USSR (con.)	126	131 891T-33
		131 891T-34
	127	59-31014
--Yugoslavia	126	131 891T-33
		131 891T-34
Scientific reports		
--Bibliography	63	59-21204
		LLU
--USSR	63	LLU
Scrap	111	59-20371
Scraper	107	59-20086
Semiconductors		
--Applications	95	59-19166
--Production	124	60-10088
--Resonance	124	59-18518
--Theory	124	59-18516
Sheets		
--Deformation	107	NRCC TT-795
	108	NRCC TT-796
		NRCC TT-797
--Testing equipment	107	60-10206
Ship hulls		
--Design	99	59-19440
Ships		
--Vibration	98	60-13062
Shock waves		
--Propagation	67	59-20920
Shot peening	118	HB 4481
Silicon carbide		
--Electrical properties	93	59-18656
Silver iodide smokes		
--Effectiveness	85	ATS-57L34R
Skin diving	89	59-19751
Slags		
--Thermodynamic properties	97	59-19813
--Viscosity	110	BISITS-1471
Smokes		
--Toxic effects	73	59-19748
Soaps		
--Cooling	81	59-20794
--Foaming	82	60-10080
--Materials	77	59-20903
--Preparation	81	59-19750
Sodium phosphates		
--Chemical reactions	84	ATS-81L32F
Solar corona		
--Analysis	66	59-19532
--Ionization	66	59-19523
Solar energy		
--Applications	95	59-19491
Solar flares		
--Motion	66	59-19469
Solutions		
--Viscosity	84	ATS-70L34R
Sound-film apparatus	92	60-10198
Sound reproduction systems		
--Design	92	59-19219
--Equipment	92	60-10198
Space flight	97	59-16410
Spectroscopy		
--Periodicals	123	OPTICS
--USSR	123	OPTICS
Speech		
--Intelligibility	96	MDF S-133

Subject	Page	Number
Spinels		
--Magnetic properties	125	59-17796
Sponge iron	113	HB 4615
Spore-pollen method	86	ATS-44L35R
Spray tanks		
--Design	64	59-19267
	88	59-13923
--Performance	65	59-19268
Stacking fault energies	122	ATS-32L35G
Stainless steel		
--Corrosion	114	HB 4482
	119	BISITS-1479
--Heat treatment	114	HB 4482
	116	HB 4478
Stars		
--Radiation	66	59-19528
Stearin pitch	81	60-10082
Steel		
--Analysis	114	BISITS-1487
--Applications	112	HB 4541
--Chemical analysis	118	BISITS-1202
--Corrosion	115	HB 4682
	118	59-17496
--Crystallization	115	HB 4542
--Deformation	115	59-20840
	116	HB 4535
--Degasification	118	59-20981
--Extrusion	118	59-20986
--Fatigue	115	BISITS-1263
	117	59-20583
	118	HB 4481
--Hardening	102	59-20578
	117	59-20847
	118	HB 4538
--Heat treatment	116	HB 4535
	118	59-17496
--Mechanical properties	103	ATS-96L34F
	115	HB 4475
	116	HB 4622
	117	59-20573
		HB 4540
	118	HB 4481
--Microstructure	120	60-10037
--Oxidation	115	HB 4682
--Phase studies	114	59-20924
--Processing	114	59-20593
		HB 4699
	115	HB 4718
	101	BISITS-1392
--Production	112	BISITS-1396
	114	HB 4144
--Rupture	115	HB 4539
--Stresses	108	ATS-77L34R
	114	59-20589
		59-20598
	116	59-20585
--Temperature factors	117	HB 4540
	118	HB 4538
--Test methods	117	59-20847
--USSR	114	60-21016
--Welding	103	HB 4464
	117	HB 4537
--X-ray analysis	114	59-20598
	115	59-20840
Steel castings		
--Degasification	118	59-20981
Steel industry	115	BISITS-1365A
--Periodicals	109	141 063T-18
--USSR	114	HB 4144
Steam power plants		
--Equipment	112	HB 4541
Stereoblock polymers	80	59-20935
Stereophonic transmission	92	59-19219
Stereospecific polymerization	79	59-20931
Sterilizers		
--Equipment	67	60-10017
Stirrers		
--Performance	110	HB 4048
Storms		
--Detection	85	ATS-63L34R
Structural shells		
--Stresses	90	MDF O-109
Styrene polymers		
--Diffusion	82	ATS-13L35R
--Synthesis	81	60-10120
Submarines		
--Detection	98	59-14634
Sulfonamides		
--Therapeutic effects	72	60-10002
Sulfur		
--Determination	75	ATS-81L34R
--Metallurgical effects	115	HB 4542
--Separation	113	HB 4623
Sulfuric acid		
--Chemical effects	89	ATS-49L34G
Sun		
--Spectra	66	59-19469
Surface-active agents		
--Applications	83	ATS-49L35R
--Chemical effects	83	ATS-91L34R
Suspension blades	107	NRCC TT-795
	108	NRCC TT-796
		NRCC TT-797
Synthetic fibers		
--Processing	105	59-20097
--Surfaces	105	59-20825
Synthetic waxes		
--Applications	105	59-20097
Taurolin	70	60-10016
	71	60-10014
	72	60-10015
Tautomerism	77	ATS-28L35R
Telephone cables		
--Joints	91	59-19754
--Performance	94	60-10271
--Production	94	60-10268
Telephone communication systems		
--Test methods	96	MDF S-133
Telescopes		
--USSR	66	59-19460
Telomerization	76	60-10063
Terrestrial magnetism		
--Electrical effects	122	59-18523
Tetracycline		
--Synthesis	81	ATS-51L35R
Thermal explosions	83	ATS-40L35R
Thrombin		
--Synthesis	68	60-10098
Thyroid extract		
--Therapeutic effects	70	60-10025

Subject	Page	Number
Thyroid gland		
--Physiology	73	59-20993
Ticks		
--Siberia	68	59-19674
		59-19682
--USSR	68	59-19683
Tin-zirconium alloys		
--Phase studies	109	ATS-95L34G
Titanium		
--Separation	119	59-13920
Titanium alloys		
--Mechanical properties	116	HB 4536
Titanium compounds		
--Electrolysis	119	59-13920
Toggle switches		
--Equipment	94	59-19747
Tolerance determinations	100	59-17875
Toluene		
--Chemical reactions	82	ATS-13L35R
Torsiographs		
--Design	108	60-10218
Towers (Chemistry)		
--Temperature	83	ATS-40L35R
Transformers		
--Applications	83	CEA-tr-A552
--Cores	114	HB 4144
--Operation	92	59-18709
Translations		
--Indexes	63	LLU
		SOVIET
Transmission lines		
--Equipment	96	59-19456
Transmissions		
--Lubrication	105	ATS-55L35G
Triethanolamine laurate		
--Applications	106	60-10061
Traveling wave antenna	92	59-31001
Tularemia		
--Diagnostic methods	65	59-19672
--Meteorological factors	72	59-19258
--Transmission	72	59-19258
Turbine blades		
--Development	101	59-19618
Turbine stators		
--Insulation	96	59-19164
Turbines		
--Design	101	59-19752
Typhoid		
--Pathology	65	59-18303
Ultrasonic analysis		
--Applications	115	BISITS-1365A
Ultrasonic radiation		
--Applications	120	59-19134
--Biochemical effects	83	ATS-20L35R
Ultraviolet radiation		
--Physiological effects	87	59-19678
Uranium		
--Separation	119	59-20790
Uranium oxides		
--Absorptive properties	84	ATS-92L34G
Uviol lamps	87	59-19678
Vanadium		
--Separation	119	59-20790
Vanadium chlorides		
--Catalytic properties	79	59-20931
Vegetable-oils		
--Isomerism	80	59-20656
--Chemical analysis	80	59-20655
Vegetables		
--Standards	63	59-20151
Veterinary medicine		
--Albania	65	59-18305
--USSR	64	59-18302
		59-18304
		59-18308
		59-18309
		59-19266
		59-19673
		59-31022
	65	59-18306
Vibration		
--Metallurgical effects	112	BISITS-1415
	119	HB 4479
--Physical effects	111	HB 4485
	113	HB 4484
Vibro-press working	111	HB 4485
Vibro-upsetting	113	HB 4484
Vinyl cyanide		
--Chemical reactions	78	ATS-15L35R
Vinyl polymers		
--Processing	76	59-19457
--Properties	79	ATS-90L35R
--Synthesis	81	ATS-82L35R
Virus diseases	64	59-19673
Virus vaccines		
--Development	69	59-19670
	73	59-19675
Viruses		
--Culture	69	59-19670
Visual perception		
--Test results	67	59-14244
Vitamin B		
--Metabolism	68	59-20975
--Synthesis	68	59-20504
--Therapeutic effects	72	59-20977
Waste gases		
--Purification	103	59-18735
--Temperature	89	ATS-49L34G
Water		
--Heat transfer	125	59-19442
--Metabolism	67	59-13894
--Physical properties	86	ATS-61L34R
Water shutoff	88	ATS-29L34R
Water vapor		
--Chemical effects	89	59-19447
--Photographic analysis	108	59-20942
Waveguides		
--Electromagnetic effects	95	59-13887
Welding		
--Electrodes	103	HB 4669
	102	60-10049
--Equipment	103	60-10078
--Periodicals	102	141 125T-19
		141 138T-19
--USSR	102	141 125T-19
		141 138T-19
Welds		
--Fracture	103	HB 4464
	117	HB 4537
--Mechanical properties	102	60-10049
--Temperature factors	102	HB 4545
--X-ray analysis	103	60-10078

Subject	Page	Number
Wheat		
--Culture	66	59-18276
Windshields		
--Configuration	104	59-18782
Wire		
--Detonation	125	59-20621
Wood pulp fibers		
--Processing	107	59-18795
X-radiation		
--Scattering	123	ATS-12L35R
Xenon		
--Diffusion	84	ATS-92L34G
Zinc		
--Chemical reactions	110	59-20451
--Vaporization	113	59-20808
Zinc alloys		
--Aging	109	HB 4483

JOURNAL INDEX

Journals marked with an asterisk are translated cover-to-cover.

Journal	Page
*Abstracts of Soviet Medicine.	C-1
Academie des Sciences Paris. Comptes Rendus (France)	
1953, v. 236, no. 23, p. 2234-2236	121
Accademia Nazionale dei Lincei, Rome. Classe di Scienze Fisiche, Matematische e Naturali Rendiconti (Italy)	
1938, 6 Ser., v. 27, p. 292-297	94
Acta Parasitologica Polonica	
1957, v. 5, no. 28, p. 613-644	B-5
Acta Societatis Botanicorum Poloniae	
1954, v. 23, no. 3, p. 589-616	B-1
1955, v. 24, no. 1, p. 65-93	B-1
1957, v. 26, no. 1, p. 79-103	B-7
Acustica (Switzerland)	
1954, no. 1, p. 445-455	108
Aerofoto"emka, Moscow	
1958, 355p.	B-1
Akademiya Meditsinskikh Nauk SSSR. Vestnik	
1959, v. 14, no. 1, p. 54-57	71
Akademiya Nauk Armyanskoy SSR, Yerevan,	
1956, v. 23, p. 81-85	B-2
Akademiya Nauk Azerbaydzhanskoy SSR, Baku. Institut Pochvovedeniya i Agrokhimii. Trudy	
1955, v. 7, p. 215-223	B-1
Akademiya Nauk Gruzinskoy SSR, Tiflis. Soobshcheniya (USSR)	
1959, v. 23, no. 1, p. 27-34	78
*Akademiya Nauk SSSR. Doklady.	C-1
1949, v. 99, v. 69, no. 4, p. 519-520	122
1950, v. 75, no. 5, p. 629-630	66
1952, v. 82, no. 1, p. 21-28	66
1952, v. 83, no. 1, p. 101-104	81
1952, v. 86, no. 6, p. 1097-1099	121
1953, v. 90, no. 3, p. 367-370	122
1954, v. 94, no. 1, p. 109-112	B-3
1954, v. 94, no. 1, p. 109-112	83
1954, v. 96, no. 1, p. 67-68	114
1954, v. 96, no. 2, p. 323-326	82
1954, v. 97, no. 5, p. 871-874	B-2
1954, v. 97, no. 6, p. 1013-1014	126
1956, v. 106, no. 3, p. 479-481	78
1956, v. 108, no. 3, p. 518-521	84
1956, v. 108, no. 4, p. 711-714	86
1957, v. 113, p. 454-457	B-4
1958, v. 119, no. 5, p. 982-985	80
1958, v. 121, no. 2, p. 339-342	86
1958, v. 122, no. 1, p. 90-109	82
1958, v. 122, no. 2, p. 254-264	82
1958, v. 122, no. 3, p. 412-437	82
1958, v. 122, no. 4, p. 629-646	82
1958, v. 122, no. 5, p. 831-852	82
1958, v. 122, no. 6, p. 1035-1053	82
1958, v. 123, no. 1, p. 83-86	76
1958, v. 123, no. 2, p. 282-284	76
1958, v. 123, no. 2, p. 331-334	68
1958, v. 123, no. 5, p. 874-877	106
*Akademiya Nauk SSSR. Doklady. (Con.)	
1959, v. 124, no. 5, p. 1061-1064	77
1959, v. 124, no. 5, p. 1080-1082	81
1959, v. 124, no. 5, p. 1144-1146	82
1959, v. 126, no. 3, p. 594-597	82
1959, v. 126, no. 6, p. 1159-1392	126
1959, v. 127, no. 6, p. 1217-1220	76
1959, v. 128, no. 1, p. 113-116	81
Biological Science Papers	C-1
Botanical Science Papers	C-1
Otdel Biokhimii	C-1
Otdel Fizicheskoy Khimii	C-1
Otdel Geokhimii	C-1
Otdel Geologii	C-1
Otdel Khimicheskaya Tekhnologiya	C-1
Otdel Khimii	C-1
Otdel Prikladnoy Fiziki	C-1
Physics Papers	C-1
Akademiya Nauk SSSR. Ikhtiologicheskaya Komissiya. Trudy Soveshchani	
1953, no. 4, p. 10-21	B-3
1953, p. 22-37	B-1
1953, no. 4, p. 48-69	B-1
1953, no. 4, p. 120-128	B-3
1954, no. 4, p. 38-47	B-5
Akademiya Nauk SSSR. Institut Mikrobiologii. Trudy	
1958, v. 5, p. 6-17	68
Akademiya Nauk SSSR. Institut Okeanologiy. Trudy	
1954, no. 11, p. 56-61	B-5
1954, no. 11, p. 206-219	B-4
*Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya	C-1
*Akademiya Nauk SSSR. Izvestiya. Seriya Geofizicheskaya	C-1
1959, no. 2, p. 262-275	85
1959, no. 3, p. 480-488	85
Akademiya Nauk SSSR. Izvestiya. Seriya Geograficheskaya	
1956, no. 4, p. 16-25	B-1
1957, no. 1, p. 19-35	B-7
1958, no. 2, p. 9-21	B-3
1958, no. 3, p. 22-36	B-3
*Akademiya Nauk SSSR. Izvestiya. Seriya Geologicheskaya	C-1
1959, v. 24, no. 6, p. 124-125	86
Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Observatoriya. Izvestiya	
1950, v. 5, no. 5, p. 86-99	66
*Akademiya Nauk SSSR. Otdeleniye Khimicheskikh Nauk. Izvestiya	C-2
1957, no. 11, p. 1349-1356	76
1958, no. 10, p. 1175-1183	84
1958, no. 11, p. 1285-1401	75
1958, no. 12, p. 1407-1499	75
1959, no. 8, p. 1397-1399	79

Journal	Page
Akademiya Nauk SSSR. Otdeleniye Tekhnicheskikh Nauk. Izvestiya	
1951, no. 3, p. 389ff	97
1956, no. 5, p. 156-163	84
1958, no. 8, p. 15-18	111
1958, no. 11, p. 98-99	98
1959, no. 1, p. 3-192	107
1959, no. 2, p. 3-208	107
Akademiya Nauk SSSR. Physico-Technical Institute	
1958, Moscow-Leningrad	120
Akademiya Nauk SSSR. Sbornik Stately po Obshchey Khimii (USSR)	
1953, v. 1, p. 246-251	82
Akademiya Nauk SSSR. Vestnik	
1958, v. 28, no. 5, p. 96-103	126
1959, v. 29, no. 3, p. 80	74
1959, v. 29, no. 6, p. 66-97	127
Akademiya Nauk SSSR. Zoologicheskiy i Institut. Trudy	
1958, v. 25, p. 3-129	74
Akademiya S.-Ih. Nauk [sic] Doklady	
1950, no. 11, p. 42-47	B-2
Akademiya Navuk BSSR, Minsk. Vestsi. Seryya Fizika-Tehnichnykh Navuk	
1956, no. 4, p. 119-131	84
*Akusticheskiy Zhurnal (USSR)	C-2
Alluminio (Italy)	
1957, v. 26, no. 10, p. 422-425	119
Aluminum (Germany)	
1957, v. 33, p. 514-520	110
Angewandte Chemie (Germany)	
1935, v. 48, no. 44, p. 689-691	110
*Antibiotiki (USSR)	C-2
1959, v. 4, no. 3, p. 90-94	71
Aptechnoye Delo (USSR)	
1959, v. 8, no. 3, p. 3-10	73
1959, v. 8, no. 3, p. 31-38	74
Archiv für das Eisenhüttenwesen (Germany)	
1933, v. 7, no. 6, p. 365-366	111
1934, v. 7, no. 7, p. 427-430	114
1934, v. 8, no. 5, p. 219-222	114
1942, v. 15, no. 9, p. 407-412	117
1959, v. 30, June, p. 351-360	112
1959, v. 30, Aug, p. 473-476	111
Archiv für Metallkunde (Germany)	
1946, v. 1, p. 16-25	116
Archiv für Technisches Messen und Industrielle Messtechnik (Germany)	
1939, no. 94, p. T49-T51	95
1939, no. 95, p. T61-T63	95
Archives de Psychologie (Switzerland)	
1951, v. 33, p. 81-130	67
Arcos (Belgium)	
1938, no. 89, p. 1951-1967	103
Arkhiv Patologii (USSR)	
1959, v. 21, no. 7	65
Association Suisse des Electriciens. Bulletin	
1957, v. 48, p. 273-282	120
*Astronomicheskiy Zhurnal (USSR)	C-2
1949, v. 26, no. 4, p. 207-218	66
1956, v. 33, no. 1, p. 62-83 and 87-92	66
*Atomnaya Energiya (USSR)	C-2
1959, v. 7, no. 1, p. 5-96	120
*Avtomaticheskaya Svarka (USSR)	C-2
1957, v. 10, no. 2, p. 32-45	103
1959, v. 12, no. 8, p. 3-96	102
*Avtomatika i Telemekhanika (USSR)	C-2
1949, v. 10, no. 6, p. 437-451	92
Batterien (Germany)	
1939, Sep, p. 1029-31;	111
1939, Oct, p. 1039-41;	111
1939, Dec, p. 1055-1057	111
1940, Feb, p. 1071-1073	111
Berg- und Hüttenmannische Monatshefte (Austria)	
1955, v. 100, no. 2, p. 109-112	119
1959, v. 104, no. 2, p. 26-31	115
Bibliogpaficheskiy Spravochnik po Voprosam Kholodil'noy Tekhniki za 1923	
1955, Moscow	
1956, 246p.	B-5
*Biofizika (USSR)	C-2
*Biokhimiya (USSR)	C-2
1954, v. 19, no. 4, p. 440-448	68
Botanicheskiy Zhurnal (USSR)	
1957, v. 42, no. 4, p. 517-534	B-1
1957, v. 42, no. 8, p. 1172-1181	B-4
Bumazhnaya Promyshlennost' (USSR)	
1957, v. 32, no. 9, p. 5-7	107
*Byulleten' Eksperimental'noy Biologii i Meditsiny (USSR)	C-2
1959, v. 47, no. 4, p. 3-123	67
*Byulleten' Izobreteniy (USSR)	C-2
1959, no. 2, p. 7-131	102
Byuro Kol'tsevaniya. Trudy (USSR)	
1955, no. 8, p. 3-4	B-1
1955, no. 8, p. 5-10	B-5
1957, v. 9, p. 5-45	B-6
la Ceramica (Italy)	
1959, new ser. v. 14, no. 4, p. 71-73	104
Chemie-Ingenieur-Technik (West Germany)	
1959, v. 31, no. 5, p. 345-351	89
Chemiker-Zeitung (West Germany)	
1959, v. 83, no. 12, p. 399-406	98
Chemische Berichte (West Germany)	
1959, v. 92, p. 837-849	77
Chernyshev, A. B., Izbranney Trudy (USSR)	
1956, p. 311-318	77
Chien chu (Chinese People's Republic)	
1958, no. 18, p. 1-3, 5-6	90
la Chimica e l'Industria (Italy)	
1959, v. 41, no. 2, p. 116-122	79
1959, v. 41, no. 5, p. 387-397	80
Congres de Chimie Industrielle no. 15, Brussels, 22-28 Sep 35. Comptes Rendus, p. 587-591	106
Deutsche Keramische Gesellschaft. Berichte (Germany)	
1936, v. 17, no. 5, p. 237-264	104
Deutsche Kraftfahrt-forschung (Germany)	
1938, no. 14, p. 1-35	104
Deutscher Wetterdienst. Berichte (West Germany)	
1954, v. 2, no. 13, p. 1-47	87
Dnepropetrovskiy Metallurgicheskiy Institut, Dnepropetrovsk. Sbornik Trudov (USSR)	
1955, v. 33, p. 449-456	105

Journal	Page
Economie Rurale (France)	
1954, no. 21, p. 5-10	63
1955, no. 23, p. 21-35	127
1956, no. 27, p. 87-92	63
1956, no. 30, p. 35-37	127
Electricite (France)	
1936, v. 20, no. 23	94
*Elektrichestvo (USSR)	C-2
1949, no. 4, p. 29-38	87
1955, no. 9, p. 44-54	92
1955, no. 10, p. 7-10	100
1956, no. 8, p. 22-26	101
1957, no. 4, p. 75-79	92
1958, no. 8, p. 5-11	65
1958, no. 8, p. 37-41	95
1958, no. 10, p. 43-47	96
1958, no. 11, p. 55-58	101
1959, no. 1, p. 64-68	96
Elektrische Nachrichten-Technik (Germany)	
1930, v. 7, no. 8, p. 307-317	94
1931, v. 8, no. 2, p. 49-62	94
1936, v. 13, no. 5, p. 149-161	96
Elektrizitatswirtschaft (Germany)	
1938, v. 37, no. 15, p. 389-392	97
Elektroschweissung (Germany)	
1930, v. 1, no. 10, p. 185-189	103
*Elektrosvyaz' (USSR)	C-2
1958, v. 12, no. 4, p. 3-80	92
1959, v. 13, no. 6, p. 5-80	91
Energetik (USSR)	
1959, no. 9, p. 1-40	96
Energomashinostroyeniye (USSR)	
1957, v. 3, no. 8, p. 1-4	101
1958, v. 4, no. 7, p. 5-9	125
*Entomologicheskoye Obozreniye (USSR)	C-2
Erdol und Kohle (West Germany)	
1959, v. 12, no. 5, p. 423-431	88
1959, v. 12, no. 6, p. 472-480	105
ETZ Elektrotechnische Zeitschrift Ausgabe A. Zentralblatt fur Elektrotechnik (Germany)	
1956, v. 77, no. 14, p. 487-490	94
Farben-Zeitung (Germany)	
1931, v. 36, p. 1090	81
*Farmakologiya i Toksikologiya (USSR)	C-2
1955, v. 18, no. 4, p. 21-27	73
Faserforschung und Textiltechnik (Germany)	
1954, v. 5, no. 11, p. 493-497	105
1958, v. 9, no. 11, p. 476-484	106
Ferrum (Germany)	
1913, v. 10, no. 4, p. 97-112	84
*Fizika Metallov i Metallovedeniye (USSR)	C-2
1959, v. 7, no. 1, p. 91-94	115
*Fizika Tverdogo Tela (USSR)	C-2
*Fiziologicheskiy Zhurnal SSSR im. I.M. Sechenova	C-2
*Fiziologiya Rastenii (USSR)	C-3
Flugwelt (West Germany)	
1954, v. 3, no. 84, p. 630, summarizing article from Krasnaya Zvezda (USSR) 7 Apr 54.	100
Folia Biologica (Czechoslovakia)	
1956, v. 2, p. 100-111	B-4
1958, v. 4, no. 3, p. 129-136	B-3

Journal	Page
Fortschritte auf dem Gebiete der Rontgenstrahlen und der Nauk-learmedizin (West Germany)	
1958, v. 89, no. 6, p. 746-752	121
Frasnaya Zvezda (USSR)	
1958, no. 274 (10657), p. 3	121
Gazzetta Chimica Italiana	
1939, v. 69, p. 453-459	76
1959, v. 89, no. 3, p. 775-783	81
*Geokhimiya (USSR)	C-3
*Geologiya Nefti i Gaza (USSR)	C-3
Gidrotekhnicheskoye Stroitel'stvo (USSR)	
1959, v. 28, no. 7, p. 1-66	90
Gidrotekhnika i Melioratsiya (USSR)	
1958, no. 8, p. 20-27	B-5
Giesserei (Germany)	
1930, v. 17, no. 32, p. 770-774	102
1930, v. 17, no. 51/52, p. 1211-1216	67
Glastechnische Berichte (West Germany)	
1958, v. 31, no. 11, p. 422-428	105
Glavnaya Geofizicheskaya Observatoriya Leningrad. Trudy (USSR)	
1957, no. 67(129), p. 33-58	85
1957, no. 67(129), p. 104-113	85
1957, no. 67(129), p. 144-152	86
Glowny Insytut Metalurgi. Prace Poland	
1951, v. 3, p. 17-22	118
Gornyy Institut, Kharkov. Nauchnyye Trudy (USSR)	
1955, v. 2, p. 127-135	108
Gosudarstvennyy Nauchno-Kontrol'nyy Institut Veterinarnykh Preparatov. Trudy (USSR)	
1956, v. 6, p. 256-262	65
1957, v. 7, p. 284-289	87
Hutnicke Listy (Czechoslovakia)	
1958, v. 13, no. 7, p. 612-619	103
Hutnik (Poland)	
1957, v. 42, no. 7/8, p. 272-277	114
Institut Prikladnoy Mineralogii. Trudy (USSR)	
1933, no. 59	87
Ionnyye Mekhanizmy Osnovnykh Nervnykh Protessov, Leningrad	
1958, p. 152-160	69
Iskusstvennyye Sputniki: Torzhestvo Idey K. E. Tsiolkovskogo, Moscow	
1958, 71p. Znaniye pub. ser. 4, no. 8-9	98
Ispol'zovaniye Solnechnoy Energii	
1958, p. 27-30 (Ser. 4, no. 14)	95
*Izmeritel'naya Tekhnika (USSR)	C-3
1958, no. 6, p. 15-17	124
Izvestiya Vysshekh Uchebnykh Zavedeniy. Chernaya Metallurgia (USSR)	
1958, no. 7, p. 191-193	111
1958, no. 10, p. 37-42	113
1958, no. 11, p. 3-8	113
1958, no. 11, p. 95-98	116
Izvestiya Vysshikh Uchebnykh Zavedeniy. Energetika (USSR)	
1958, v. 1, no. 9, p. 61-64	83
1958, v. 1, no. 9, p. 65-67	83
Izvestiya Vysshikh Uchebnykh Zavedeniy. Fizika (USSR)	
1958, v. 1, no. 6, p. 145-151	82

Journal	Page
Izvestiya Vysshikh Uchebnykh Zavedeniy. Khimiya i Khimicheskaya Tekhnologiya (USSR)	
1958, v. 1, no. 1, p. 86-93	78
Izvestiya Vysshikh Uchebnykh Zavedeniy. Neft' i Gas (USSR)	
1959, no. 1, p. 27-33	94
1959, v. 2, no. 4, p. 49-55	109
1959, v. 2, no. 5, p. 31-36	87
Izvestiya Vysshykh Uchebnykh Zavedeniy. Radiofizika (USSR)	
1958, v. 1, no. 1, p. 34-40 and 150-152	87
Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya (USSR)	
1959, no. 1, p. 74-81	89
Jen Min Jih Pao (Chinese People's Republic)	
1959, 1 Jan	103
Jernkontoret, Stockholm. Annaler (Sweden)	
1958, v. 142, no. 6, p. 289-319	113
1958, v. 142, no. 7, p. 428-466	110
Journal de Physiologie (France)	
1948, v. 40, p. 89-110	71
Journal of Polymer Science (U. S.)	
1955, v. 16, p. 143-154	79
Journal of Science (Japan)	
1959, v. 4, p. 28-34	125
Justus Liebigs Annalen der Chemie (Germany)	
1890, v. 259, no. 2/3, p. 253-276	80
Kaiser-Wilhelm-Institut fur Eisenforschung Dusseldorf. Mettellungen (Germany)	
1936, v. 18, p. 1-14	117
Kami Parupu Gijutsu Kyokai-Shi (Japan)	
1958, v. 12, no. 93, p. 806-808	107
*Kauchuk i Rezina (USSR)	C-3
1959, v. 18, no. 4, p. 1-63	104
*Kemisk Maanedsblad og Nordisk Handelsblad for Kemisk Industri (Scandinavian)	C-3
Khimiya i Tekhnologiya Topliv i Masel (USSR)	
1958, v. 3, no. 8, p. 44-49	89
1958, v. 3, no. 9, p. 13-18	79
1959, v. 4, no. 3, p. 60-64	104
Khirurgiya (USSR)	
1959, no. 7, p. 3-20, 38-50, 112-113 and 116-117	70
1959, no. 7, p. 116-117	72
Kislorod (USSR)	
1959, v. 12, no. 2, p. 9-14, 39-44	89
1959, v. 12, no. 3, p. 51-52	89
Klinicheskaya Meditsina (USSR)	
1959, v. 37, no. 7, p. 3-6	70
1959, v. 37, no. 8, p. 14-19	70
Koks i Khimiya (USSR)	
1957, no. 12, p. 22-26	90
1958, no. 10, p. 29-33	89
1959, no. 8, p. 3-64	109
Kolloid-Zeitschrift (West Germany)	
1959, v. 165, no. 1, p. 3-15	124
*Kolloidnyy Zhurnal (USSR)	C-3
1958, v. 20, no. 6, p. 681-761	82
1959, v. 21, no. 4, p. 377-511	82
Kommunist Moscow (USSR)	
1958, v. 35, July, p. 35-46	126
Konstant-Transformator Typen KM 11, 13, 14, 15, 21, 23, 24, und 32 and Magnetischer, Sauerstoffmesser Magnos I, Frankfurt a. M, n. d.	83
Konstruktion im Maschinen- Apparate- u. Geratebau [sic]	
1959, no. 3, p. 82-89	101
Krasnaya Zvezda (USSR)	
1958, 13 May	106
1958, 30 May	106
*Kristallografiya (USSR)	C-3
Kryl'ya Rodiny (USSR)	
1958, no. 9	88
Leningrad U. Uchenye Zapiski (USSR)	
1956, no. 219, p. 64-71 Seriya Fizicheskikh Nauk no. 9	87
Leningrad U. Vestnik. (USSR)	
1955, no. 4, p. 75-83	B-2
1957, v. 12, no. 4, p. 118-126, Seriya Fiziki i Khimiyi no. 1	76
1957, v. 12, no. 10, Seriya Fiziki i Khimiyi, no. 2, p. 148-151	119
1957, v. 12, no. 16, Seriya Fiziki i Khimiyi no. 3, p. 41-43	126
Lesnaya Promyshlennost' (USSR)	
1954, v. 39, no. 6, p. 4-9	B-2
Liteynoye Proizvodstvo (USSR)	
1957, no. 5, p. 22-25	109
1958, no. 5, p. 19-21	112
1959, no. 3, p. 1-49	102
1959, no. 9, p. 1-48	102
Machine Design (U. S.)	
1951, v. 23, no. 3, p. 121-123	100
Matematika v. SSSR za Sorok Let 1917-57, Moscow	
1959, p. 857-877	126
Materialy po Evolyutsionnoy Fiziologii (USSR)	
1957, v. 2, no. 2, p. 86-101	69
1957, v. 2, no. 2, p. 160-171	67
Meditsinskaya Parazitologiya i Parazitarnyye Bolezni (USSR)	
1956, v. 25, no. 4, p. 318-323	71
1958, v. 27, no. 6, p. 693-695	88
Meditsinskaya Promyshlennost' SSSR	
1959, v. 13, no. 4, p. 29-25	73
Meditsinskaya Radiologiya (USSR)	
1959, v. 4, no. 6, p. 56-60	74
die Medizinische (West Germany)	
1958, no. 36, p. 1401-1402	73
Medizinische Monatsschrift (West Germany)	
1951, v. 5, no. 4, p. 239-244	72
Medycyna Weterynaryjna (Poland)	
1957, v. 12, no. 9, p. 533-534	B-4
1957, v. 13, no. 2, p. 75-77	B-3
1957, v. 13, no. 11, p. 694-698	B-4
Melliant Textilberichte (West Germany)	
1958, v. 39, no. 10, p. 1141-1145	105
Metall (West Germany)	
1958, v. 12, no. 6, p. 625-628	112
*Metallovedeniye i Termicheskaya Obrabotka Metallov (USSR)	C-3
1959, no. 1, p. 6-10	119

Journal	Page
Metallovedeniye i Termicheskaya Obrabotka Metallov (USSR) (Con.)	
1959, no. 1, p. 10-15	115
1959, no. 1, p. 15-19	116
1959, no. 1, p. 19-25	120
1959, no. 1, p. 26-30	116
1959, no. 1, p. 31-39	119
1959, no. 1, p. 39-41	118
1959, no. 1, p. 42-47	118
1959, no. 1, p. 47-49	114
1959, no. 1, p. 52-54	109
1959, no. 1, p. 55-57	113
1959, no. 1, p. 57-59	111
1959, no. 3, p. 2-6	116
1959, no. 3, p. 6-13	116
1959, no. 3, p. 13-16	117
1959, no. 3, p. 17-19	118
1959, no. 3, p. 19-24	115
1959, no. 3, p. 25-28	117
1959, no. 3, p. 28-32	112
1959, no. 3, p. 33-37	115
1959, no. 3, p. 38-43	112
1959, no. 3, p. 44-46	111
1959, no. 3, p. 46-48	102
*Metallurg (USSR)	C-3
1959, no. 4, p. 3-7	113
Metallurgiya i Metallovedeniye, Moscow	
1958, p. 452-458	120
Meteoretika (USSR)	
1956, v. 14, p. 62-69	67
Meteorologiya i Gidrologiya (USSR)	
1959, no. 2, p. 63-66	85
1959, no. 3, p. 58-62	85
1959, no. 6, p. 55-58	86
1959, no. 8, p. 3-55	85
*Mikrobiologiya (USSR)	C-3
1955, v. 2, p. 188-192	B-6
Mikroskopie [sic]	
1958, v. 64, no. 1, p. 53-54	105
Minerva Medica (Italy)	
1951, v. 42, no. 2, p. 1-4	72
Mirovye Resursy Zernovykh Kul'tur i l'na ikh Ispol'zovaniye v Selektsiy, Leningrad	
1957, 463p.	B-6
Mitteilungen der Deutschen Material-prufungstalten (Germany)	
1930, no. 8, p. 98-99	107
1931, no. 15, p. 70-73	107
Mokuzai Kogyo (Japan)	
1958, v. 13, no. 8, p. 15-20	107
Moscow U. Uchenyye Zapiski (USSR)	
1936, no. 6, p. 207-211	81
Moscow U. Vestnik Seriya Matematiki, Mekhaniki, Astronomii, Fiziki, Khimii (USSR)	
1958, v. 13, no. 4, p. 209-213	75
1958, v. 13, no. 6, p. 3-244	121
Moskovskiy Neftyanoy Institut. Trudy, (USSR)	
1956, v. 16, p. 70-81	87
Myasnaya Industriya SSSR	
1957, v. 28, no. 5, p. 53-55	B-2
1957, v. 28, no. 5, p. 58	B-2
1957, v. 28, no. 6, p. 46-47	B-6
1957, v. 28, no. 6, p. 48-49	B-6

Journal	Page
Myasnaya Industriya SSSR (Con.)	
1957, v. 28, no. 6, p. 50-51	B-2
1957, v. 28, no. 6, p. 51-53	B-2
Nachrichtentechnische Fachberichte (West Germany)	
1957, v. 6, no. 2, p. 16-18	93
die Naturwissenschaften (Germany)	
1942, v. 30, p. 63	68
1953, v. 40, no. 19, p. 507-508	115
Nauchno-Issledovatel'skiy Institut Vaktsin i Syvorotok. Trudy (USSR)	
1958, v. 9, p. 5-14	71
1958, v. 9, p. 15-18	68
1958, v. 9, p. 23-26	68
1958, v. 9, p. 27-32	68
1958, v. 9, p. 53-61	72
1958, v. 9, p. 101-106	69
1958, v. 9, p. 117-120	68
Nauchnyye Doklady Vysshey Shkoly. Biologicheskiye Nauki (USSR)	
1958, no. 4,	75
Nauchnyye Doklady Vysshey Shkoly. Khimiya i Khimicheskaya Teknologiya (USSR)	
1958, no. 1, p. 83-85	75
Nauchnyye Doklady Vysshey Shkoly. Mashinostroyeniye i Priborostroyeniye (USSR)	
1958, no. 3, p. 3-230	102
Nauchnyye Doklady Vysshey Shkoly. Metallurgiya (USSR)	
1959, no. 2, p. 84-88	114
Nauka i Zhizn' (USSR)	
1959, v. 26, no. 1, p. 66	66
Nederlands Tijdschrift voor Geneeskunde	
1953, v. 97, II, no. 18, p. 1118-1122	68
Neftyanik (USSR)	
1959, v. 4, no. 3, p. 4-8	99
Neftyanoye Khozyaystvo (USSR)	
1956, v. 34, no. 11, p. 31-36	88
1958, v. 36, no. 8, p. 65-69	88
1958, v. 36, no. 12, p. 33-35	88
1958, v. 36, no. 12, p. 40-45	88
1959, v. 37, no. 1, p. 36-43	100
1959, v. 37, no. 4, p. 67-70	88
1959, v. 37, no. 5, p. 27-32	88
Nekotoryye Dinamicheskiye Zadachi Teorii Obolochek Moscow	
1957, p. 3-192	90
Neue Hütte (East Germany)	
1958, v. 3, Oct, p. 608-615	114
Nihon Hihakai Kensa Kyokai Shi (Japan)	
1958, v. 7, no. 2, p. 79-85	120
Nihon Kagaku Zasshi (Japan)	
1931, v. 52, p. 668-672	113
Nihon Kinzoku Gakkai-Shi (Japan)	
1940, v. 4, no. 7, p. 228-242	116
il Nuovo Cimento (Italy)	
1954, Ser. 9, v. 12, no. 1, p. 37-59	107
1956, Ser. 10, v. 4, no. 4, p. 922-928	108
1956, Ser. 10, v. 4, no. 5, p. 1133-1141	108
Oberflachentechnik (Germany)	
1937, v. 14, p. 59-61	112
Olearia (Italy)	
1947, v. 1, no. 6, p. 309-319	78
1952, v. 6, no. 5/6, p. 139-143	80
1953, v. 7, no. 7/8, p. 183-187	80

Journal	Page
Opredeliteli po Faune SSSR, Moscow-Leningrad	
1950, v. 35	74
*Optika i Spektroskopiya (USSR)	C-3
1958, v. 4, no. 4, p. 532	123
1958, v. 4, no. 4, p. 543-546	123
1958, v. 4, no. 6, p. 795-797	123
1958, v. 4, no. 6, p. 799	123
1958, v. 5, no. 6, p. 692-698	124
1959, v. 6, no. 4, p. 429-569	123
Osnovy Infrakrasnoy Tekhniki 2ed. Moscow	
1957, Chap. 13, p. 276-303	123
Osnovy Nematodologiy Moscow	
1954, v. 3, 684p.	B-6
Osnovy Tsestodlogiy (USSR)	
1951, v. 1, 735p.	B-6
Parazitologiya i Invazionnye Bolenzi Sel'skokhozialstvennykh Zhivotnykh, Moscow	
1956, 479p.	B-1
Parfumerie und Kosmetik (West Germany)	
1953, v. 34, p. 15-16	77
Patent (Belgium)	
520 196	91
571 718	76
Patent (France)	
588 617	91
736 379	76
836 776	123
986 637	90
989 548	127
1 046 910	92
1 076 558	123
1 103 314	104
1 160 056	91
1 164 393	109
Patent (Germany)	
147 193	100
438 191	91
612 509	94
644 173	89
644 455	91
667 334	73
705 419	89
724 028	94
850 328	81
877 868	89
907 996	101
919 727	124
955 377	101
961 742	100
Patent (Italy)	
244 484	98
361 149	91
421 443	100
457 227	104
535 712	79
552 738	77
Patent (Norway)	
91 959	95
Patent (Sweden)	
109 090	99
Patent (Switzerland)	
196 850	99
273 020	107
Patent (USSR)	
24 874	77
Patent application (Germany)	
K 14 320	100
Petroleum (Germany)	
1930, v. 26, no. 15, p. 5	105
Pharmaceutica Acta Helvetiae (Switzerland)	
1947, v. 22, p. 612-613	73
die Photographische Industrie (Germany)	
1930, v. 28, 18 June, p. 680-681	127
1930, v. 28, 23 July, p. 821-823	92
1930, v. 28, 22 Oct, p. 1156-1157	195
Plemennoye Delo v Skotovstve, Moscow	
1950, 495p.	B-4
*Pochvovedeniye (USSR)	C-3
1939, no. 7, p. 10-43	B-2
1945, no. 3/4, p. 199-208	B-5
1949, no. 12, p. 394-399	B-2
1954, no. 9, p. 426-432	B-4
1955, v. 4, p. 69-81	B-6
1956, no. 4, p. 1-23	B-5
1956, no. 8, p. 49-56	B-5
1956, no. 10, p. 69-90	B-5
1957, no. 10, p. 1-15	B-5
1957, v. 11, p. 1-13	B-6
1957, no. 12, p. 1-19	B-2
1957, no. 12, p. 45-51	B-3
1957, p. 165-178	B-5
Polskie Pismo Entomologiczne	
1958, v. 27, no. 2, p. 21-36	B-1
1958, v. 27, no. 5, p. 71-73	B-6
1958, v. 27, no. 11, p. 109-113	B-6
Prace Instytutow Ministerstwa Hutnictwa (Poland)	
1958, v. 10, no. 3, p. 180-183	118
la Prensa (Argentina)	
1958, 24 May	98
*Priborostroyeniye (USSR)	C-3
*Pribory i Tekhnika Eksperimenta (USSR)	C-3
1959, no. 2, p. 3-154	121
*Prikladnaya Matematika i Mekhanika (USSR)	C-3
1951, v. 15, p. 765-770	107
Priroda (USSR)	
1956, v. 45, no. 8, p. 114-115	B-1
Problemy Endokrinologii i Gormonoterapii (USSR)	
1958, v. 4, no. 5, p. 15-24	73
*Problemy Gematologii i Perelivaniya Krovi (USSR)	C-3
1959, v. 4, no. 3, p. 3-61	67
Problemy Kinetiki i Kataliza (USSR)	
1957, v. 9, no. 9, p. 162-167	83
Promyshlennaya Energetika (USSR)	
1958, v. 13, no. 9, p. 1-7	120
Przemysl Chemiczny (Poland)	
1952, v. 31, 8, no. 7/8, p. 358-360	77
Przemysl Spozywczy (Poland)	
1957, v. 11, no. 1, p. 26-30	B-1
1958, v. 12, no. 4, p. 132-135	B-4
1958, v. 12, no. 5, p. 169-175	B-2
Radex-Rundschau (Austria)	
1959, May, p. 546-555	112
Radio Moscow (USSR)	
1958, no. 7, p. 3-5	97
1959, no. 2, p. 6-7	97

Journal	Page
*Radiotekhnika (USSR)	C-3
1959, v. 14, no. 6, p. 3-16 and 63	92
*Radiotekhnika i Elektronika (USSR)	C-3
1958, v. 3, no. 11, p. 1323-1407	92
1959, v. 4, no. 1, p. 17-20	87
1959, v. 4, no. 2, p. 161-180	95
Referativnyy Zhurnal. Biologiya (USSR)	
1958, no. 18	65
1958, no. 21	67
1958, no. 21	74
1958, no. 23	64
1959, no. 2	64
1959, no. 2	69
1959, no. 2	73
Referativnyy Zhurnal. Elektrotekhnika (USSR)	
1959, no. 1, p. 1-319	92
Referativnyy Zhurnal. Fizika (USSR)	
1959, no. 7, Abstracts 14583-16847	121
*Referativnyy Zhurnal. Geologiya (USSR)	C-4
Referativnyy Zhurnal. Khimiya (USSR)	
1959, no. 12, Abstracts 41289-44594	75
1959, no. 13, Abstracts 44758-48354	75
1959, no. 14	75
*Referativnyy Zhurnal. Metallurgiya (USSR)	C-4
Part B.	109
1958, nos. 5-6	109
Revista Brasileira de Biologia	
1941, v. 1, no. 4, p. 431-434	68
Revista Sud-americana de Endocrinologia Immunologia y Quimioterapia (Argentina)	
1935, v. 20, p. 45-46	70
Revue de Metallurgie (France)	
1956, v. 53, no. 12, p. 897-914	118
1959, v. 56, no. 1, p. 11-24	115
Reyon, Zellwolle und Andere Chemiefasern (West Germany)	
1959, v. 37, no. 9, p. 85-94	80
Roczniki Nauk Lesnych (Poland)	
1954, no. 5, p. 137-160	B-2
Roczniki Nauk Rolniczych Seria A: Roslinna (Poland)	
1954, v. 70, p. 77-96	B-5
Rybnoye Khozyaystvo (USSR)	
1956, v. 32, no. 2, p. 55-59	B-4
1958, v. 34, no. 5, p. 8-13	B-4
1958, v. 34, no. 7, p. 43-49	B-4
1958, v. 34, no. 9, p. 40-49	B-4
Sbornik Materialov po Rezul'tatem Izucheniya Mlekopitayushchikh v Gosudarstvennykh Zapovednikakh, Moscow	
1956, 216p.	B-1
Schweizerische Medizinische Wochenschrift	
1937, v. 67, no. 19, p. 422	72
1938, v. 68, no. 25, p. 711-713	73
1942, v. 72, p. 544-547	71
Scientific Information Rept.	
6 Nov 59, 107p.	126
20 Nov 59, 93p.	126
Seifen-Ole-Fette-Wachse (Germany)	
1922, v. 49, no. 29, p. 507-508	78
1929, v. 56, no. 3, p. 19-20	78
1936, v. 63, no. 41, p. 833-835	78
1947, v. 73, p. 41-42	82
1952, v. 78, no. 17, p. 409-410	81
Sel'khoznashina (USSR)	
1951, no. 10, p. 10-13	B-6
1952, no. 3, p. 5-10	B-6
1956, no. 3, p. 22-24	B-3
Siemens Zeitschrift (Germany)	
1931, v. 11, no. 1, p. 26-32	103
Slaboproudy Obzor (Czechoslovakia)	
1954, v. 15, no. 12, p. 579-586	95
1958, v. 19, no. 7, p. 464-466	96
Sociedad Argentina de Biologia, Buenos Aires. Revista	
1949, v. 45, no. 3/4, p. 91-112	71
Sovetskaya Aviatsiya (USSR)	
1959, no. 72, p. 2	108
1959, no. 119, p. 2	108
Sovetskaya Geologiya; Sbornik Statey (USSR)	
1958, no. 12, p. 3-12	86
1958, no. 12, p. 36-42	86
1958, no. 12, p. 69-97	86
*Sovetskaya Pedagogika (USSR)	C-4
Sovetskiy Patriot (USSR)	
1959, 19 Apr, p. 3, cols. 1-2	75
Sovetskoye Zdravookhraneniye (USSR)	
1958, v. 17, no. 12, p. 55-56	72
1959, v. 18, no. 8, p. 19-25	72
Spravochnik po Dozimetricheskim, Radiometricheskim i Elektronno-Fizicheskim Priboram, Schetchikam, Stsintillyatoram i Fotoumnozhitelyam, Moscow	
1959, p. 7-253	121
Sprechsaal (Germany)	
1937, v. 70, p. 29-30	120
1938, v. 71, p. 185-187	90
Stahl und Eisen (Germany)	
1935, v. 55, no. 23, p. 616-623	101
1955, v. 75, no. 11, p. 691-693	103
1956, v. 76, no. 2, p. 61-68 (Rept. 587 of Steel Mill Committee of Verein Deutscher Eisenhutteleute).	118
1956, v. 76, no. 16, p. 1028-1032	110
1956, v. 76, no. 23, p. 1570-1573	117
1956, v. 76, no. 26, p. 1728-1734	117
1959, v. 79, 28 May, p. 786-797	115
1959, v. 79, 11 June, p. 846-854	110
1959, v. 70, no. 17, p. 1183-1186	113
*Stal' (USSR)	C-4
*Stanki i Instrument (USSR)	C-4
*Steklo i Keramika (USSR)	C-4
1954, v. 11, no. 10, p. 24-26	104
Stroitel'nyye Materialy (USSR)	
1958, v. 4, no. 6, p. 8-11	90
Sudostroyeniye (USSR)	
1956, no. 3(161), p. 4-10	98
1958, v. 24, no. 1	99
1958, v. 24, no. 6, p. 1-7	99
*Svarochnoye Proizvodstvo (USSR)	C-4
1958, no. 1, p. 32	103
1959, no. 9, p. 1-48	102
die Technik (Germany)	
1956, v. 11, no. 9, p. 645-650	102
Technisches Zentralblatt fur Praktische Metallbearbeitung (Germany)	
1939, v. 49, no. 7/8, p. 317-318, 320 and 322	119

Journal	Page
Teknisk Ukeblad (Norway)	
1921, v. 39, no. 7, p. 77-79	83
1921, v. 39, no. 8, p. 85-89	83
1958, v. 105, 10 Apr, p. 323-331	119
Telegraphen und Fersprech Technik (Germany)	
1926, v. 15, Jan, p. 13-18	94
Teoriya Prostranstva, Vremeni i Tyagoteniya Moscow	
1955	125
*Teoriya Veroyatnostey i Yeye Primeneniye (USSR)	C-4
Teploenergetika (USSR)	
1957, v. 4, no. 3, p. 22-26	97
1958, v. 5, no. 6, p. 71-76	109
1958, v. 5, no. 7, p. 55-63	97
1958, v. 5, no. 8, p. 44-48	97
1958, v. 5, no. 8, p. 56-60	97
1958, v. 5, no. 11, p. 9-13	97
Terapevticheskiy Arkhiv (USSR)	
1959, v. 31, no. 7, p. 93-95	70
Textil (Spain)	
1959, v. 14, no. 1, p. 28-31	78
Therapie der Gegenwart (Germany)	
1941, v. 32, Jan, p. 46-47	67
Tikhookeanskiy Nauchno-Issledovatel'skiy Institut. Rybnogo Khozyaystva i Okeanografiy Izvestiya (USSR)	
1954, no. 41, p. 111-195	B-6
1954, no. 41, p. 197-229	B-3
1954, no. 41, p. 333-336	B-6
1957, no. 44, p. 97-110	B-3
Torfyanaya Promyshlennost' (USSR)	
1949, no. 8, p. 23-25	77
*Tsement (USSR)	C-4
1959, v. 25, no. 4, p. 1-32	90
Tsentral'naya Aerologicheskaya Observatoriya. Trudy (USSR)	
1958, no. 20, p. 3-16	87
1958, no. 20, p. 73-80	85
Tsvetnyy Metally (Non-Ferrous Metals) (USSR)	C-4
1957, v. 30, no. 7, p. 70-75	102
1959, v. 32, no. 6, p. 57-62	119
Tetsu to Hagane (Japan)	
1951, v. 37, no. 5, p. 23-30	120
Therapie (France)	
1955, v. 10, no. 6, p. 907-926	72
Ugol'naya Promyshlennost' Pol'skoy Narodnoy Respubliki, Moscow	
1957, p. 221-226	93
Ukrainskiy Matematicheskiy Zhurnal (USSR)	
1959, v. 11, no. 1, p. 3-117	107
Universytet Marii Curie Sklodowskiej. [Roczniki] (Poland)	
1951, v. 6, no. 9, p. 193-209	B-1
1953, v. 8E, p. 41-63	B-7
*Uspekhi Fizicheskikh Nauk (USSR)	C-4
1956, v. 59, no. 3, p. 553-582	124
1956, v. 60, no. 2, p. 191-212	124
1959, v. 68, no. 4, p. 565-747	125
1959, v. 69, no. 1, p. 3-170	125
VDI-Forschungsheft (Germany)	
1930, no. 336	102

Journal	Page
Verein Deutscher Ingenieure. Zeitschrift (Germany)	
1943, v. 87, no. 9/10, p. 137-138	102
1957, v. 99, no. 13, p. 587-591	101
1959, v. 101, no. 12, p. 463-468	106
Vereinigung der Grosskesselbesitzer. Mitteilungen (West Germany)	
1958, Dec, p. 397-406	118
Vestnik Elektropromyshlennosti (USSR)	
1954, v. 25, no. 2, p. 17-21	95
1958, v. 29, no. 2, p. 7-12	96
1959, v. 30, no. 8, p. 1-80	92
*Vestnik Mashinostroyeniya (USSR)	C-4
Vestnik Rentgenologii i Radiologii (USSR)	
1959, v. 34, no. 2, p. 38-42	74
Vestnik Sel'skokhozyaystvennoy Nauki (USSR)	
1958, v. 3, no. 1, p. 92-117	69
Vestnik Svyazi (USSR)	
1959, no. 6, p. 1-32	92
1959, no. 8, p. 1-34	92
Veterinariya (USSR)	
1958, v. 35, no. 11, p. 94-96	64
1959, v. 36, no. 2, p. 42-44	65
1959, v. 36, no. 4, p. 8-13	64
1959, v. 36, no. 4, p. 71-72	64
1959, v. 36, no. 4, p. 79-81	65
1959, v. 36, no. 4, p. 84-87	64
1959, v. 36, no. 4, p. 88	65
1959, v. 36, no. 4, p. 91-94	64
1959, v. 36, no. 4, p. 94-96	64
1959, v. 36, no. 5, p. 62-63	65
1959, v. 36, no. 5, p. 85-89	64
1959, v. 36, no. 7, p. 69-75	65
1959, v. 36, no. 7, p. 92-93	64
Vodosnabzheniye i Sanitarnaya Tekhnika (USSR)	
1958, no. 10, p. 24-27	103
*Voprosy Ekonomiki (USSR)	C-4
Vorposy Ekonomiki Sel'skogo Khozyaistva: Sbornik Statey, Moscow	
1956, 376p.	B-1
Voprosy Mikropaleontologii (USSR)	
1958, v. 2, p. 53-73	75
*Voprosy Onkologii (USSR)	C-4
Voprosy Poroshkovoy Metallurgii i Prochnosti Materialov (USSR)	
1958, p. 79-89	110
*Voprosy Virusologii (USSR)	C-4
1959, v. 4, no. 1, p. 63-67	68
Vorlaufige Mitteilung uber die Kontinuierliche Sulfierung von Naphtalin, Hochst	
14 Apr 37, PB 58 725	82
Voyenno-Meditsinskiy Zhurnal (USSR)	
Spec. Suppl. 3, p. 14-18	70
Vrachebnoye Delo (USSR)	
1958, no. 9, p. 991-994	72
Vsesoyuznyy Nauchno-Issledovatel'skiy Institut Morskogo Rybnogo Khozyaystva i Okeanografii. Trudy (USSR)	
1958, v. 35	B-5
1958, v. 35	B-4
1958, v. 35, p. 46-52	B-3
1958, v. 35, p. 53-69	B-5
1958, v. 35, p. 117-185	B-4

Journal	Page
Vsesoyuznyy Nauchno-Issledovatel'skiy Institut Morskogo Rybnogo Khozyaystva i Okeanografii. Trudy (USSR) (Con.)	
1958, v. 35, p. 145-151	B-3
1958, v. 35, p. 192-204	B-3
1958, v. 35, p. 205-230	B-4
Vsesoyuznyy Nauchno-Issledovatel'skiy Institut Ozernogo i Rechnogo Rybnogo Khozyaystva. Izvestiya (USSR)	
1957, v. 38, 342p.	B-1
Wiadomosci Parazytologiczne (Poland)	
1957, v. 3, no. 2-3, p. 261-272	B-6
Zashchita Rasteniĭ ot Vrediteleĭ i Bolezney (USSR)	
1959, v. 4, no. 2, p. 10-12	66
1959, v. 4, no. 2, p. 12	66
*Zavodskaya Laboratoriya (USSR)	C-4
Zeitschrift für Anorganische Chemie (Germany)	
1939, v. 240, 7 Mar, p. 289-299	119
Zeitschrift für das Gesamte Schiessund Sprengstoffwesen (Germany)	
1932, v. 27, no. 3, p. 73-76	98
1932, v. 27, no. 4, 125-127	98
1932, v. 27, no. 5, p. 156-158	98
Zeitschrift für Elektrochemie (Germany)	
1937, v. 43, no. 2, p. 104-119	84
1957, v. 61, no. 8, p. 1028-1048	123
1957, v. 61, no. 10, p. 1291-1301	83
Zeitschrift für Erzbergbau und Metallhuttenwesen (West Germany)	
1955, v. 8 suppl, p. B269-B274	89
Zeitschrift für Flugtechnik und Motorluftschiffahrt (Germany)	
1931, v. 22, no. 2, p. 49-52	108
Zeitschrift für Metallkunde (West Germany)	
1946, v. 37, no. 6, p. 161-167	114
1959, v. 50, no. 5, p. 269-274	109
Zeitschrift für Naturforschung (West Germany)	
1959, v. 14a, no. 5/6, p. 582-584	84
Zeitschrift für Physik (Germany)	
1929, v. 56, p. 790-801	83
1958, v. 150, no. 2, p. 162-171	125
1959, v. 153, no. 3, p. 314-316	120
1959, v. 155, no. 2, p. 247-262	122
Zeitschrift für Technische Physik (Germany)	
1942, v. 23, p. 39-49	122
Zentralblatt für Gynakologie (Germany)	
1939, v. 63, p. 373-375	72
1939, v. 63, p. 2057-2063	71
1940, v. 64, p. 1225-1230	70
Zernosusheniye i Zernosushilki, Moscow	
1958, 323p.	B-2
*Zhurnal Analiticheskoy Khimii (USSR)	C-4
1959, v. 14, no. 3, p. 360-361	80

Journal	Page
*Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki (USSR)	C-4
1954, v. 26, no. 1, p. 120-123	123
1954, v. 27, no. 1(7), p. 115	84
1958, v. 34, no. 2, p. 528-529	126
1958, v. 35, no. 6(12), p. 1573-1575	126
1958, v. 35, no. 28, p. 551	125
Zhurnal Fizicheskoy Khimii (USSR)	
1939, v. 13, no. 6, p. 738-755	83
1947, v. 21, no. 10, p. 1183-1204	83
1958, v. 32, no. 11, p. 2565-2570	76
1959, v. 33, no. 6, p. 1328-1335	83
1959, v. 33, no. 8, p. 1681-1686	83
*Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR)	C-4
1956, v. 27, no. 7, p. 96-100	69
1959, v. 30, no. 1, p. 24-28	73
1959, v. 30, no. 3, p. 13-16	68
1959, v. 30, no. 3, p. 22-26	86
1959, v. 30, no. 3, p. 26-28	65
1959, v. 30, no. 3, p. 33-35	69
1959, v. 30, no. 3, p. 41-46	72
1959, v. 30, no. 8, p. 3-9	69
1959, v. 30, no. 8, p. 9-12	70
1959, v. 30, no. 8, p. 12-17	71
1959, v. 30, no. 8, p. 18-21	69
1959, v. 30, no. 8, p. 21-26	70
Zhurnal Nauchnoy i Prikladnoy Fotografii i Kinematografii (USSR)	
1958, v. 3, no. 3, p. 191-196	105
1958, v. 3, no. 5, p. 335-344	106
*Zhurnal Neorganicheskoy Khimii (USSR)	C-5
1958, v. 3, no. 9, p. 2213-2214	76
1959, v. 4, no. 8, p. 1705-1942	75
Zhurnal Obshchey Biologii (USSR)	
1954, v. 15, no. 1, p. 18-30	B-2
*Zhurnal Obshchey Khimii (USSR)	C-5
1896, v. 28, no. 1, p. 1-15	122
Zhurnal Obshchey Khimii (USSR)	
1956, v. 26, no. 7, p. 2042-2046	78
1958, v. 28, no. 12, p. 3317-3319	78
1959, v. 29(91), no. 1, p. 329-332	73
1959, v. 29(91), no. 4, p. 1064-1072	80
1959, v. 29, no. 7, p. 2310-2314	78
1959, v. 29, no. 8, p. 2643-2646	82
*Zhurnal Prikladnoy Khimii (USSR)	C-5
1935, v. 8, no. 3, p. 501-504	79
1959, v. 32, no. 3, p. 649-655	93
1959, v. 32, no. 7, p. 1496-1502	84
1959, v. 32, no. 8, p. 1795-1797	81
*Zhurnal Tekhnicheskoy Fiziki (USSR)	C-5
1950, v. 20, no. 6, p. 666-669	123
1954, v. 24, no. 5, p. 811-817	93
1955, v. 25, no. 1, p. 117-124	120
*Zhurnal Vysshey Nervnoy Deyatelnosti (USSR)	C-5
Zoologicheskiy Zhurnal (USSR)	
1954, v. 33, no. 6, p. 1312-1324	B-5
1959, v. 38, no. 2	74

TRANSLATION NUMBER INDEX

Number	Page
59-11792	69
59-11979	87
59-12023	94
59-12884	120
59-12978	90
59-13608	67
59-13777	74
59-13836	68
59-13886	85
59-13887	95
59-13888	72
59-13889	70
59-13890	73
59-13892	69
59-13894	67
59-13899	65
59-13903	86
59-13907	84
59-13913	89
59-13914	73
59-13918	71
59-13919	70
59-13920	119
59-13921	86
59-13922	86
59-13923	88
59-13924	72
59-13936	75
59-13943	74
59-13954	70
59-13973	65
59-13977	75
59-13978	75
59-13985	89
59-14244	67
59-14634	98
59-14900	120
59-16034	94
59-16160	87
59-16173	127
59-16189	95
59-16199-8 (SOVIET)	63
59-16356	109
59-16366	74
59-16367	74
59-16410	97
59-16606 (BISITS-1202)	118
59-16683 (MDF ABCON-1)	90
59-16724	122
59-16725	122
59-16726	122
59-16844	98
59-17113	120
59-17143	82
59-17255 (CEA-tr-A567)	119
59-17496	118
59-17503	87
59-17706	88
59-17796	125
59-17812	81
59-17875	100
59-18124	124
59-18215-12 (LLU)	63
59-18276	66
59-18277	66
59-18282	91
59-18291	94
59-18295	100
59-18302	64
59-18303	65
59-18304	64
59-18305	65
59-18306	65
59-18308	64
59-18309	64
59-18331	93
59-18379	77
59-18428	70
59-18440	75
59-18481	73
59-18516	124
59-18518	124
59-18523	122
59-18604 (NRCC TT-795)	107
59-18605 (NRCC TT-796)	108
59-18606 (NRCC TT-797)	108
59-18630	101
59-18642	87
59-18649	92
59-18656	93
59-18678	84
59-18709	92
59-18712	100
59-18723	101
59-18735	103
59-18744	92
59-18752	76
59-18782	104
59-18785	91
59-18795	107
59-18838	73
59-18841	71
59-18957	100
59-18969 (BISITS-1392)	181
59-19134	120
59-19153	101
59-19154	76
59-19155	111
59-19164	96
59-19165	65
59-19166	95
59-19219	92
59-19223	91
59-19255	86
59-19256	69
59-19257	65
59-19258	72
59-19259	68
59-19265	68
59-19266	64
59-19267	64
59-19268	65
59-19269	69
59-19314	97
59-19315	97
59-19316	89
59-19324	90
59-19437	102
59-19439	126
59-19440	99
59-19442	125
59-19444	109
59-19446	97
59-19447	89
59-19456	96
59-19457	76
59-19460	66
59-19469	66
59-19475	98
59-19481	66
59-19483	121
59-19488	87
59-19491	95
59-19492	97
59-19507	126
59-19523	66
59-19528	66
59-19532	66
59-19618	101
59-19623	105
59-19625	97
59-19669	74
59-19670	69
59-19671	72
59-19672	65
59-19673	64
59-19674	68
59-19675	73
59-19677	68
59-19678	87
59-19679	69
59-19680	71
59-19681	65
59-19682	68
59-19683	68
59-19684	72
59-19695	108
59-19702	108
59-19729	96

Number	Page
(MDF S-133)	96
59-19736	
(MDF B-140)	122
59-19740	68
59-19741	91
59-19742	123
59-19744	123
59-19747	94
59-19748	73
59-19749	89
59-19750	81
59-19751	89
59-19752	101
59-19754	91
59-19755	100
59-19756	104
59-19758	99
59-19787 (MDF L-125)	126
59-19790 (MDF B-142)	66
59-19811	96
59-19813	97
59-19814	105
59-19818	86
59-19819	99
59-19876 (ATS-85L33R)	126
59-19930	
(ATS-23L32R)	94
59-19945	
(ATS-02L33R)	93
59-20071	
(CEA-tr-A552)	83
59-20086	107
59-20097	105
59-20151	63
59-20159	127
59-20160	63
59-20162	127
59-20213	126
59-20262	126
59-20263	126
59-20269	80
59-20331	99
59-20371	111
59-20451	110
59-20485	121
59-20504	68
59-20523	94
59-20558	102
59-20571	121
59-20573	117
59-20578	102
59-20581	101
59-20583	117
59-20585	116
59-20589	114
59-20593	114
59-20598	114
59-20599	104
59-20621	125
59-20622	83
59-20655	80
59-20656	80
59-20675	77
59-20680	78
59-20681	126
59-20697	98
59-20724	89
59-20727	78
59-20767	80
59-20775	99
59-20778	124
59-20786	78
59-20788	78
59-20789	78
59-20790	119
59-20791	125
59-20794	81
59-20800	
(AEC-tr-2888)	121
59-20803	106
59-20808	103
59-20825	105
59-20826	106
59-20835	124
59-20840	115
59-20845	101
59-20847	117
59-20854	84
59-20855	123
59-20856	123
59-20858	123
59-20859	123
59-20894	123
59-20895	79
59-20903	77
59-20915	95
59-20918	93
59-20920	67
59-20923	95
59-20924	114
59-20931	79
59-20935	80
59-20941	103
59-20942	108
59-20945	72
59-20948	74
59-20949	75
59-20975	68
59-20981	118
59-20977	72
59-20985	79
59-20986	118
59-20987	117
59-20992	80
59-20993	73
59-20994	68
59-20995	71
59-20999	71
59-21033	88
59-21096	106
59-21103	106
59-21104	106
59-21150	103
59-21200	87
59-21201	82
59-21202	98
59-21203	97
59-21204	63
59-22082 (MDF O-109)	90
59-22126 (NRCC C-3137)	121
59-22158	91
59-22227	90
59-22238	
(RIS rept. 95525)	76
59-22379	77
59-22391	
(ABSTRACTS)	109
59-22544	
(ABSTRACTS)	109
59-22723	
(BULLETIN)	67
59-22724	
(RADIO)	92
59-22725	
(TELECOMMUNICATIONS)	92
59-22726	
(PROBLEMS)	67
59-22727	
(COLLOID)	82
59-22728	
(OPTICS)	123
59-22729	
(PROCEEDINGS)	82
59-22730	
(BULLETIN)	75
59-22731	
(BULLETIN)	75
59-31000	121
59-31001	92
59-31008	71
59-31009	69
59-31010	70
59-31011	69
59-31012	70
59-31014	127
59-31016	74
59-31019	86
59-31020	72
59-31021	70
59-31022	64
60-10002	72
60-10014	71
60-10015	72
60-10016	70
60-10017	67
60-10019	73
60-10022	71
60-10023	73
60-10024	72
60-10025	70
60-10026	120
60-10029	120
60-10031	104
60-10037	120
60-10038	103
60-10040	116
60-10049	102
60-10053	102
60-10054	67
60-10055	120
60-10060	76
60-10061	106
60-10063	76
60-10064	76
60-10065	80
60-10067	111
60-10068	73

Number	Page
60-10074	122
60-10077	79
60-10078	103
60-10080	82
60-10082	81
60-10084	119
60-10088	124
60-10090	77
60-10091	79
60-10097	94
60-10098	68
60-10120	81
60-10127	80
60-10138	107
60-10198	92
60-10204	119
60-10206	107
60-10208	94
60-10213	105
60-10214	127
60-10216	107
60-10218	108
60-10222	100
60-10263	105
60-10264	120
60-10265	90
60-10268	94
60-10269	96
60-10271	94
60-10287	104
60-10288	97
60-10289	112
60-11006	64
60-11010	64
60-11015	85
60-11020	69
60-11021	73
60-11024	74
60-11029	85
60-11031	121
60-12001 (HB-4476)	116
60-12002 (HB-4475)	115
60-12003 (HB-4474)	119
60-12004 (HB-4479)	119
60-12005 (HB-4478)	116
60-12006 (HB-4477)	120
60-12007 (HB-4481)	118
60-12008 (HB-4480)	118
60-12009 (HB-4483)	109
60-12010 (HB-4482)	114
60-12011 (HB-4542)	115
60-12012 (HB-4540)	117
60-12013 (HB-4541)	112
60-12014 (HB-4539)	115
60-12015 (HB-4538)	118
60-12016 (HB-4537)	117
60-12017 (HB-4536)	116
60-12018 (HB-4535)	116
60-12019 (HB-4485)	111
60-12020 (HB-4484)	113
60-12021 (HB-4544)	111
60-12022 (HB-4543)	112
60-12023 (HB-4706)	110
60-12024 (HB-4545)	102
60-12025 (HB-4638)	110
60-12026 (HB-4649)	112
60-12027 (HB-4664)	113
60-12028 (HB-4699)	114
60-12029 (HB-4669)	103
60-12030 (HB-4144)	114
60-12031 (HB-4464)	103
60-12032 (HB-4623)	113
60-12033 (HB-4615)	113
60-12034 (HB-4048)	(A 110
60-12035 (HB-4679)	113
60-12036 (HB-4678)	111
60-12037 (HB-4622)	116
60-12038 (HB-4682)	115
60-12039 (HB-4616)	113
60-12040 (HB-4718)	115
60-12041 (Fok)	125
60-12042 (MDF-H-100)	110
60-12046 (ATS-37L35R)	76
60-12047 (ATS-85L34R)	87
60-12048 (ATS-57L34R)	85
60-12049 (ATS-46L35R)	88
60-12050 (ATS-07L35R)	104
60-12051 (ATS-83L34R)	82
60-12052 (ATS-12L35R)	123
60-12053 (ATS-77L35R)	107
60-12054 (ATS-45L35R)	81
60-12055 (ATS-01L35R)	75
60-12056 (ATS-52L35R)	81
60-12057 (ATS-01L36R)	81
60-12058 (ATS-02L36R)	82
60-12060 (ATS-97L34R)	104
60-12061 (ATS-64L34R)	83
60-12062 (ATS-13L35R)	82
60-12063 (ATS-89L34R)	88
60-12064 (ATS-49L35R)	83
60-12065 (ATS-54L35R)	106
60-12066 (ATS-40L35R)	83
60-12067 (ATS-91L34R)	83
60-12068 (ATS-47L35R)	88
60-12069 (ATS-70L34R)	84
60-12070 (ATS-93L35R)	71
60-12071 (ATS-28L35R)	77
60-12072 (ATS-84L34R)	88
60-12074 (ATS-81L35R)	82
60-12075 (ATS-30L35J)	89
60-12076 (ATS-62L33R)	77
60-12077 (ATS-95L34G)	109
60-12078 (ATS-66L33G)	77
60-12079 (ATS-52L34R)	83
60-12080 (ATS-50L34R)	83
60-12081 (ATS-15L35R)	78
60-12082 (ATS-32L34R)	83
60-12083 (ATS-19L35R)	78
60-12085 (ATS-61L35R)	78

Number	Page
60-12086 (ATS-20L35R)	83
60-12087 (ATS-46L34R)	99
60-12088 (ATS-08L35R)	109
60-12089 (ATS-81L34R)	75
60-12090 (ATS-99L34R)	84
60-12091 (ATS-05L35R)	78
60-12092 (ATS-02L35I)	119
60-12093 (ATS-74L34G)	88
60-12094 (ATS-24L33G)	83
60-12095 (ATS-94L34G)	83
60-12096 (ATS-00L35G)	105
60-12097 (ATS-92L34G)	84
60-12098 (ATS-81L32F)	84
60-12099 (ATS-49L34G)	89
60-12100 (ATS-55L35G)	105
60-12101 (ATS-82L33G)	123
60-12102 (ATS-32L35G)	122
60-12104 (ATS-43L35F)	76
60-12105 (ATS-09L35F)	76
60-12106 (ATS-72L35R)	79
60-12107 (ATS-44L35R)	86
60-12108 (ATS-62L35F)	90
60-12109 (ATS-63L33I)	79
60-12110 (ATS-90L35R)	79
60-12111 (ATS-71L34R)	100
60-12112 (ATS-98L34R)	84
60-12113 (ATS-29L34R)	88
60-12114 (ATS-76L34R)	95
60-12115 (ATS-86L33R)	80
60-12116 (ATS-16L35R)	86
60-12117 (ATS-48L35R)	88
60-12118 (ATS-51L35R)	81
60-12119 (ATS-35L35R)	82
60-12121 (ATS-77L34R)	107
60-12122 (ATS-53L34R)	87
60-12123 (ATS-58L34R)	85
60-12124 (ATS-92L35C)	78
60-12126 (ATS-82L35G)	106
60-12127 (ATS-73L33G)	98
60-12129 (ATS-62L34R)	87
60-12131 (ATS-61L34R)	86
60-12133 (ATS-75L35R)	78
60-12134 (ATS-11L35J)	107
60-12135 (ATS-36L35G)	105
60-12136 (ATS-96L34F)	103
60-12138 (ATS-86L34G)	84
60-12140 (ATS-63L34R)	85
60-12141 (ATS-59L34R)	85
60-12142 (ATS-17L35W)	84
60-12143 (ATS-04L35R)	75
60-12144 (MDF P-136)	122
60-12145 (BISITS-1346)	103
60-12146 (BISITS-1471)	110
60-12147 (BISITS-1365A)	115
60-12148 (BISITS-1263)	115
60-12149 (BISITS-1463)	111
60-12150 (BISITS-1465)	112
60-12151 (BISITS-1415)	112
60-12152 (BISITS-1421)	118
60-12153 (BISITS-1396)	112
60-12154 (BISITS-1479)	119
60-12155 (BISITS-1487)	114
60-12174 (RUSSIAN)	63
60-13007	109
60-13034	123
60-13062	98
60-21016	114
ACSI H-2949 A	106
ACSI H-2949 B	106
ACSI H-2949 D	106
ACSI H-3325	103
ACSI H-3496	88
ACSIL Trans-773	108
ACSIL Trans-1014	120
AD-72 787	100
AEC-tr-2888	121
AERE Lib/Trans-567	87
AERE Lib/Trans-1169	111
AERE Lib/Trans-1180	76
AF-1 255 863	70
AF-1 255 929	75
AF-1 256 070	108
AF-1 256 123	91
AF-1 256 242	114
APL/JHU TG 230-T67	97
APL/JHU TG 230-T85	98
APL/JHU TG 230-T89	82
APL/JHU TG 230-T91	87
APL/JHU TG 230-T172	63
ATS-00L35G	105
ATS-01L35R	75
ATS-01L36R	81
ATS-02L33R	93
ATS-02L35I	119
ATS-02L36R	82
ATS-04L35R	75
ATS-05L35R	78
ATS-07L35R	104
ATS-08L35R	109
ATS-09L35F	76
ATS-11L35J	107
ATS-12L35R	123
ATS-13L35R	82
ATS-15L35R	78
ATS-16L35R	86
ATS-17L35W	84
ATS-19L35R	78
ATS-20L35R	83
ATS-23L32R	94
ATS-24L33G	83
ATS-28L35R	77
ATS-29L34R	88
ATS-30L35J	89
ATS-32L34R	83
ATS-32L35G	122
ATS-35L35R	82
ATS-36L35G	105
ATS-37L35R	76
ATS-40L35R	83
ATS-43L35F	76
ATS-44L35R	86
ATS-45L35R	81
ATS-46L34R	99
ATS-46L35R	88
ATS-47L35R	88
ATS-48L35R	88
ATS-49L34G	89
ATS-49L35R	83
ATS-50L34R	83
ATS-51L35R	81
ATS-52L34R	83
ATS-52L35R	81
ATS-53L34R	87
ATS-54L35R	106
ATS-55L35G	105

Number	Page
ATS-57L34R	85
ATS-58L34R	85
ATS-59L34R	85
ATS-61L34R	86
ATS-61L35R	78
ATS-62L33R	77
ATS-62L34R	87
ATS-62L35F	90
ATS-63L33I	79
ATS-63L34R	85
ATS-64L34R	83
ATS-66L33G	77
ATS-70L34R	84
ATS-71L34R	100
ATS-72L35R	79
ATS-73L33G	98
ATS-74L34G	88
ATS-75L35R	78
ATS-76L34R	95
ATS-77L34R	108
ATS-77L35R	107
ATS-81L32F	84
ATS-81L34R	75
ATS-81L35R	82
ATS-82L33G	123
ATS-82L35G	106
ATS-83L34R	82
ATS-84L34R	88
ATS-85L33R	126
ATS-85L34R	87
ATS-86L33R	80
ATS-86L34G	84
ATS-89L34R	88
ATS-90L35R	79
ATS-91L34R	83
ATS-92L34G	84
ATS-92L35C	78
ATS-93L35R	71
ATS-94L34G	83
ATS-95L34G	109
ATS-96L34F	103
ATS-97L34R	104
ATS-98L34R	84
ATS-99L34R	84
BISITS-1202	118
BISITS-1263	115
BISITS-1346	103
BISITS-1365A	115
BISITS-1392	101
BISITS-1396	112
BISITS-1415	112
BISITS-1421	118
BISITS-1463	111
BISITS-1465	112
BISITS-1471	110
BISITS-1479	119
BISITS-1487	114
BuShips Trans-666	94
CEA-tr-A552	83
CEA-tr-A567	119
CTS-362	124
CTS-387	124
CTS-403	122
CTS-412	97
CTS-415	105
CTS-422	101
CTS-442	109
DTMB Trans-290	99
DTMB Trans-291	98
DSIR LLU M. 7	101
DSIR LLU M. 19	87
DSIR LLU M. 26	92
DSIR LLU M. 55	84
DSIR LLU M. 63	92
DSIR LLU M. 66	100
DSIR LLU M. 78	101
DSIR LLU M. 134	92
DSIR LLU M. 142	76
DSIR LLU M. 253	120
DSIR LLU M. 274	101
DSIR LLU M. 277	76
DSIR LLU M. 278	111
DSIR LLU M. 305	96
DSIR LLU M. 306	65
DSIR LLU M. 307	95
F-TS-8407/III	100
F-TS-9595/V	66
F-TS-9605/V	66
F-TS-9617/V	66
F-TS-9625/V	66
F-TS-9672/V	123
F-TS-9689/III	126
F-TS-9707/V	98
F-TS-9715/V	97
F-TS-9769/V	66
F-TS-9835/III	95
F-TS-9844/III	87
F-TS-9969/III	121
HB-4048	110
HB-4144	114
HB-4464	103
HB-4474	119
HB-4475	115
HB-4476	116
HB-4477	120
HB-4478	116
HB-4479	119
HB-4480	118
HB-4481	118
HB-4482	114
HB-4483	109
HB-4484	113
HB-4485	111
HB-4535	116
HB-4536	116
HB-4537	117
HB-4538	118
HB-4539	115
HB-4540	117
HB-4541	112
HB-4542	115
HB-4543	112
HB-4544	111
HB-4545	102
HB-4615	113
HB-4616	113
HB-4622	116
HB-4623	113
HB-4638	110
HB-4649	112
HB-4664	113
HB-4669	103
HB-4678	111
HB-4679	113
HB-4682	115
HB-4699	114
HB-4706	110
HB-4718	115
ILU 58 ICC LI	120
JPRS(DC)-527	90
JPRS(DC)-924	121
JPRS(DC)-954	127
JPRS(DC)-L-1871	69
JPRS(DC)-L-1881	92
JPRS(DC)-L-1887	71
JPRS(DC)-L-1895	69
JPRS(DC)-L-1896	70
JPRS(DC)-L-1897	69
JPRS(DC)-L-1898	70
JPRS(DC)-L-1904	74
JPRS(DC)-L-1906	86
JPRS(DC)-L-1907	72
JPRS(DC)-L-1908-D	70
JPRS(DC)-L-1909	64
JPRS(NY)-1680	67
JPRS(NY)-1898	95
JPRS(NY)-1910	84
JPRS(NY)-1927	89
JPRS(NY)-1934	75
JPRS(NY)-1969	65
JPRS(NY)-1973	75
JPRS(NY)-1974	75
JPRS(NY)-1982	89
JPRS(NY)-1989	64
JPRS(NY)-1995	64
JPRS(NY)-1997	69
JPRS(NY)-1999	73
JPRS(NY)-2003	74
JPRS(NY)-2004	121
JPRS(NY)-L-894	74
JPRS(NY)-L-948	68
JPRS(NY)-L-985	85
JPRS(NY)-L-986	72
JPRS(NY)-L-987	70
JPRS(NY)-L-988	73
JPRS(NY)-L-989	69
JPRS(NY)-L-991	67
JPRS(NY)-L-997	65
JPRS(NY)-L-1000	86
JPRS(NY)-L-1002	73
JPRS(NY)-L-1005	71
JPRS(NY)-L-1006	70
JPRS(NY)-L-1007	119
JPRS(NY)-L-1008	86
JPRS(NY)-L-1009	86
JPRS(NY)-L-1010	88
JPRS(NY)-L-1011	72
JPRS(NY)-L-1019	74
JPRS(NY)-L-1021	70
JPRS(NY)-L-1056	85
JPRS(NY)-L-1067	85
LC-899	90
LL-TL-13	120
LLU	63
LSD	65
MCL-40/III	66
MDF ABCON-1	90
MDF B-140	122

Number	Page
MDF B-142	66
MDF H-100	110
MDF L-125	126
MDF O-109	90
MDF P-136	122
MDF S-133	96
Me 262	88
M-V Trans-2077	93
M-V Trans-2185	92
M-V Trans-2191	100
M-V Trans-2202	92
M-V Trans-2270	87
M-V Trans-2323	101
M-V Trans-2350	84
M-V Trans-2496	92
M-V Trans-2545	95
M-V Trans-2549	96
M-V Trans-2572	101
M-V Trans-2575	65
NRCC C-3137	121
NRCC TT-795	107
NRCC TT-796	108
NRCC TT-797	108
NRCC TT-820	121
NRL trans-669	87
NRL Trans-709	87

Number	Page
PB 131 891T-33	126
PB 131 891T-34	126
PB 141 014T-11	102
PB 141 015T-41	126
PB 141 019T-13	107
PB 141 019T-15	107
PB 141 035T-5	107
PB 141 045T-21	85
PB 141 049T-18	125
PB 141 049T-19	125
PB 141 051T-6	121
PB 141 057T-15	104
PB 141 063T-18	109
PB 141 064T-9	82
PB 141 074T-18	75
PB 141 082T-21	120
PB 141 084T-20	96
PB 141 091T-19	90
PB 141 094T-9	90
PB 141 099T-16	91
PB 141 107T-18	92
PB 141 108T-17	92
PB 141 108T-18	92
PB 141 109T-8	92
PB 141 118T-2	102
PB 141 120T-9	121

Number	Page
PB 141 125T-19	102
PB 141 130T-13	102
PB 141 130T-14	102
PB 141 138T-19	102
RAE Trans-773	76
RIS-95525	76
RTP Trans-2530	88
RTS-1040	102
RTS-1049	97
RTS-1052	97
RTS-1053	97
RTS-1054	97
RTS-1062	109
RTS-1074	125
RTS-1084	76
RTS-1091	124
RTS-1093	89
RTS-1094	96
RTS-1095	99
RTS-1099	126
RTS-1105	89
RTS-1120	86
RTS-1143	105
RTS-1171	96
STI vaccine	65
STS-295	94
Trans-TRB-258	101